ONLINE

SOT Society of Toxicology
Creating a Safer and Healthier World by Advancing the Science of Toxicology

Communiqué

Special Issue 2015

SOT News

President's Message

President
Norbert E. Kaminski

On this snowy Midwest January morning, I have come to the realization that the holidays have passed in what seems like a blink of an eye, as has my year as SOT President. In spite of the brunt of winter weather still laying ahead, my attention is quickly focusing on the many tasks requiring attention for the upcoming Society's Annual Meeting and the warm inviting temperatures we can expect in San Diego.

With that in mind, I do want to thank Peter Goering, Chair, and John Morris, Co-Chair, as well as the entire Scientific Program Committee for their hard work in planning the 54th Annual Meeting of the Society of Toxicology. This group has assembled an outstanding scientific program, including more than 2,800 abstracts that will be presented. I am certain you will find the meeting both intellectually stimulating and enjoyable. It is also noteworthy that the abstract number for the upcoming meeting represents yet another important success as it is the fourth highest in the history of the Society.

In each of my previous President's Messages, I have taken the opportunity to provide regular updates on what has been one of Council's major undertakings during this past year, the development of a new strategic plan. I am pleased to report that a draft of the strategic plan now has been developed as well as preliminarily shared with the leadership of SOT component groups, including Specialty Sections, Regional Chapters, and Special Interest Groups as well as with key informants that were interviewed in summer of 2014 during our information-gathering stage.

Input from this initial vetting process, which occurred through a series of three webinars in December and January, was positive, highly constructive, and served as a mechanism for further adjustments to the draft plan. The next phase is distribution of the revised draft strategic plan to the entire SOT membership for their review, followed by two webinars in mid-February during which time Council will be soliciting additional input prior to the Annual Meeting. A session on Thursday morning during the Annual Meeting also has been scheduled to allow Council the opportunity to answer your questions and/or address any concerns in regard to the strategic plan. We look forward to receiving your input.

As strategic plans go, there is the development phase and then the implementation phase. Both are challenging if done well; however, implementation arguably is the more difficult of the two. SOT will be adopting several approaches to assist in facilitating implementation of our plan, once finalized. The first is that Council has prioritized which components (i.e., strategic objectives) within the strategic plan will be implemented beginning in 2015–2016 and which components will be phased in at a later date going forward. Second, during the January Council meeting, preliminary tactics and activities were developed for implementing those strategic objectives that were deemed to be of highest priority. Third, Council has identified committees and component groups within the Society that will be charged with assisting in the implementation of specific strategic objectives. I do want to emphasize that Council will seek input from committees and component groups for their ideas on implementation as well. The fourth component is to initiate implementation as quickly as possible.

In Council's continuing discussions on setting priorities and implementation, one of the strategic objectives that received significant attention was to "Promote the Recruitment, Education, and Development of a Diverse and Creative Community of Toxicologists." In these discussions, it was recognized that the aforementioned strategic objective is relevant to all career stages, very broad in scope, and highly cross-cutting, touching on the activities of numerous committees and programs within the SOT. In light of the breadth of this strategic objective, its importance as well as the diversity of SOT activities and resources that are currently being directed toward this area, Council felt strongly that a more in-depth analysis was required prior to initiating new tactics and/or activities in the implementation of this specific strategic objective. In light of that, Council will be undertaking a comprehensive analysis during the next year of current activities and programs in the areas of recruitment and retention, education, and diversity to assess their impact, strengths, limitations, and whether there are better ways to achieve the Society's short- and long-term goals.

As I bring my last President's message to a close, I would like to express my gratitude to our membership for giving me this opportunity to serve the Society. This past year I have had the pleasure of closely working with an exceptionally collegial and hardworking Council. Likewise, I have had the chance to meet and also work with many SOT members who I had not previously known. After more than 25 years as a member of the Society of Toxicology, I never cease to be amazed by the willingness of our membership to give so generously of their time to promote our Society and our discipline. Thank you for a challenging as well as highly rewarding year. I look forward to seeing you in San Diego.

Norbert E. Kaminski, PhD
2014–2015 SOT President

SOT 2015–2016 Council and Committee Members Election Results Announced

The Society of Toxicology (SOT) Nominating Committee is pleased to announce the results of the 2015–2016 election.

2015–2016 Vice President-Elect is Patricia E. Ganey who is a professor of Pharmacology and Toxicology at Michigan State University.

Dr. Ganey is active in training medical and graduate students and in research. She has noted that: "The SOT has a strong tradition of involving trainees and other young scientists in its activities. It is critical to the excellence and long-term health of the Society to continue to attract this group of people to the discipline of toxicology and to the SOT as a professional home....As SOT President, I will work to ensure that the SOT continues to be the premier professional society in Toxicology and to provide services that promote the career development of its members. In addition, I will increase efforts to enhance the reputation of the discipline. The SOT and its membership have much to contribute as leaders in global efforts to improve human and environmental health." Dr. Ganey joined SOT in 1987.

2015–2016 Secretary-Elect is Ruth A. Roberts who is a senior director at AstraZeneca and an adjunct professor at the University of Birmingham, United Kingdom.

Dr. Roberts has stated that: "My vision is for a Society with a stronger global focus on the science of toxicology and its translational power in transforming discovery science, practice, policy, and other domains of implementation….Harnessing our power by convening the membership in new and innovative forums will allow us to address seemingly intractable and persistent problems that plague society. I will bring a unique perspective on how to address these challenges and embrace these opportunities on a global scale, capitalizing on the emerging world powers in science and research." She joined SOT in 1998.

2015–2018 Councilor is Rosonald R. Bell who serves as both regulatory strategy lead and a drug safety team lead at Pfizer Inc., Groton, Connecticut.

Dr. Bell expressed his vision for the future: “By continuing its path of excellence and addressing the new challenges of tomorrow through creative programming, education, and service offerings, the Society of Toxicology and its membership will continue to thrive as leads of scientific creativity, rigor, and integrity and contribute significantly to the health care challenges ahead….The discoveries of scientists help to shape our views about ourselves and our place in the universe. I am committed on a personal and professional level to further this approach and to strengthen the Society’s role in leading sciences on a global level.” He joined SOT in 1998.

Tao Wang

2015–2018 Councilor is Tao Wang who has been with Novartis Pharmaceuticals for more than a decade and is currently an associate director in the Preclinical Safety Department.

She has stated that her vision for the Society is closely aligned with the SOT Strategic Plan: “I will strive to increase the interactions among toxicologists and scientists from other disciplines to expand the impact of our Society and toxicology in general on public health….; promote the participation of women and minorities in SOT, not only as members, but also as active participants….; expand global interactions and promote SOT as a truly international forum for the discussion of global issues impacting the toxicology field; and continue to actively promote student and postdoc mentoring and leadership development. I strongly believe that these members are the future of our Society.” Dr. Wang joined the Society in 1997.

The **Awards Committee** members include: Matthew J. Campen, University of New Mexico, SOT member since 2002; Nathan J. Cherrington, University of Arizona, SOT member since 1997; Elaine M. Faustman, University of Washington, SOT member since 1984; and Raymond G. York, RG York & Associates, LLC, SOT member since 1986.

The **Membership Committee** members include: Silvia B. Barros, University of São Paulo, School of Pharmaceutical Sciences, SOT member since 2001; Peyton L. Myers, US Food and Drug Administration, SOT member since 2000; and Martin L. Stephens, Johns Hopkins Bloomberg School of Public Health, SOT member since 2007.

The **Nominating Committee** members include: SOT Past President Michael P. Holsapple, Covance Laboratories, Inc.; SOT member since 1985; from the Regional Chapters is Lynette K. Rogers, The Research Institute at Nationwide Children’s Hospital/The Ohio State University, SOT member since 2004; from the Special Interest Groups Sharmilee P. Sawant, Halyard Health, Inc., SOT member since 2001; from the Specialty Sections Angela J. Harris, Environ, SOT member since 2003.

The members of the SOT 2014–2015 Nominating Committee include Chair William Slikker Jr., US Food and Drug Administration-National Center for Toxicological Research; Kim Boekelheide, Brown University; George B. Corcoran, Wayne State University; Brian S. Cummings, University of Georgia; Bruce A. Fowler, Consultant, Adjunct Professor, Emory School of Public Health, and Presidents Professor, University of Alaska-Fairbanks; Hanan N. Ghantous, US Food and Drug Administration-Center for Drug Evaluation and Research; B. Paige Lawrence, University of Rochester Medical Center; Anthony M. Ndifor, Janssen R&D, Jean F. Regal, University of Minnesota Medical School; and Lois D. Lehman-McKeeman, Bristol-Myers Squibb Company (SOT Council Contact).

SOT Is Matching Dollar-for-Dollar Contributions to All Established Endowment Funds

The Society of Toxicology is matching contributions to all established funds dollar for dollar. The 1 to 1 match is effective for contributions made between July 1, 2013, and June 30, 2016, or until the $400,000 in matching funds has been expended.

The SOT Endowment Fund has a mission of assisting in advancing the science of toxicology by providing financial support for the Society's programs. Contributors to the SOT Endowment Fund are helping to build for the future of toxicology through long-term financial support, which also generates critical resources that enable the Society to fulfill its mission, now and in years to come.

Your generous contributions to the SOT Endowment Fund help support the following:

- Underwrite more than 140 Student Travel Awards to the SOT Annual Meetings.
- Establish funds that pay tribute to those colleagues who have devoted their careers to educating other toxicologists.
- Strengthen global participation through financial support for scientists to travel from developing countries to attend the SOT Annual Meeting.
- Recognize those toxicologists who have made enormous contributions to improving human health and the environment.

Consider making a contribution today and invest in the future of Toxicology by visiting the SOT website.

TSCA Task Force Update: Plan to Attend March 25 Annual Meeting Session

Members of Congress, key stakeholders, and the scientific community regard the reform of the 1976 Toxic Substances Control Act (TSCA) as a priority for the 114th Congress. Thus, the SOT TSCA Task Force continues to build on its past accomplishments (SOT Continues to Forge Relationships with TSCA Legislators) to encourage needed modernization of this act.

To learn more about the ongoing and future activities of this Task Force, please consider attending *TSCA Task Force: Update: Strategy, Issues, and Outreach,* on Wednesday, March 25, 7:00 am–7:45 am, San Diego Convention Center, Room 8.

The goal of the Task Force has been to serve as a scientific resource and to meet with all the members of the House Energy and Commerce Subcommittee on the Environment and the Economy and the Senate Environment and Public Works Committee who are addressing TSCA reform. The reform process is well under way and continues.

In 2014, this Task Force made substantial progress as a key stakeholder in the legislative efforts to modernize this outdated statute, including conducting a series of educational meetings with 24 offices of the House of Representatives and the US Senate. This Task Force also submitted letters to the chairman and ranking member of the House Environment Subcommittee and the Senate EPW Committee detailing the Society's perspective concerning the importance of the scientific underpinnings of TSCA reform legislation as well as providing science-based comments on various draft bills that were put forward in 2014.

Moreover, the Task Force members have explained the scientific meaning of such concepts as hazard, vulnerable populations, exposure, mixtures, and risk assessment during congressional meetings. Understanding of these concepts is critical to an effective TSCA reform.

Recent activities include the following:

- On January 20, 2015, Task Force members George Gray and Mark LaFranconi participated in a roundtable discussion with a bipartisan group of the House Energy and Commerce Subcommittee, including eight representatives and thirteen staff members.
- On February 9, 2015, Roll Call published an opinion editorial, "TSCA Reform Should Embrace the Best Application of Toxicological Science—a Perspective From Its Practitioners," developed by the Task Force and signed by SOT 2014–2015 President Norbert E. Kaminski.
- On February 18, 2015, Task Force member James C. Lamb IV held meetings with the staff of two senators and on the 23rd, Dr. Lamb and Task Force Chair Daland R. Juberg met with the staff of two representatives. Dr. Juberg continued this educational outreach on the 25th at meetings with the staff of three senators.

Other members of the Task Force, who have been involved in previous Hill visits and other initiatives, include Susan J. Borghoff, Deborah A. Cory-Slechta, William H. Farland, Ronald S. Filler, Michael P. Holsapple, Moiz Mumtaz, Ruthann A. Rudel, Robert S. Skoglund, and Council Contacts Lorrene A. Buckley and Leigh Ann Burns Naas.

At the January SOT Council Meeting, Council was strongly in support of extending the duration of the TSCA Task Force for two additional years, with the hope that TSCA reform will pass sometime within the next 24 months. Please join us to learn more about this important Society activity.

SOT Strengthens Global Collaborations: Iowa State and National University of Colombia Connection

The Society of Toxicology (SOT) is interested in strengthening global participation and outreach. One of the several mechanisms of achieving this objective is through the Global Senior Scholar Exchange Program. Professor Gonzalo Diaz from the National University of Colombia in Bogota was one of the recipients in 2014 and was hosted by Wilson K. Rumbeiha, Professor in The College of Veterinary Medicine, Iowa State University, Ames, Iowa. Dr. Diaz attended the 2014 SOT Annual Meeting, followed with a two-week visit in Dr. Rumbeiha's laboratory.This visit opened new opportunities for interactions with the National University of Colombia, including the possibility of sending students from Colombia to conduct graduate work or to run specific experiments that are impossible to run locally in Colombia. Such an exchange is of great importance for the development of toxicology research. A second area of collaboration identified is in the area of veterinary diagnostic toxicology as this Columbian university does not have an analytical diagnostic toxicology laboratory. The opportunity to send toxicological samples for diagnosis to Iowa State University opens the possibility of publishing unreported toxicological issues in Colombia.

Dr. Rumbeiha paid a reciprocal visit to Colombia in December 2014 for one week. During his visit, he gave two presentations at the National University of Colombia in Bogota. Dr. Rumbeiha, who is also the President of Toxicologists Without Borders, Inc., presented "Toxicologists Without Borders, Inc: Vision and Mission" to an audience of about 40 students, faculty, and staff. The objectives of this not-for-profit outreach organization were discussed and attendees were encouraged to submit proposals for consideration. His second talk was "Career Pathways in Toxicology," also to an audience of about 40 people. The talk covered a wide range of topics about SOT, the role of toxicologists in society, career opportunities for toxicologists, and SOT Global initiatives that are devised to attract new professionals to the Society. Pictured are the attendees at Dr. Rumheiha's talk on "Career Pathways in Toxicology" at the National University of Columbia, Bogota.

Dr. Rumbeiha met and had discussions with many toxicologists, including Professor Miguel Cote, Head of the Toxicology Program at the National University of Colombia. He also met Professor Jaime Fernando Gonzalez of the

Aquatic Toxicology Program. A major area of need identified was help to train toxicologists at the PhD level. The National University of Colombia trains toxicologists up to the MSc level only. The program at Iowa State University was highlighted by Dr. Rumbeiha and Professor Diaz. Pictured at the left are Professors Diaz (left) and Rumbeiha (third from left) with two graduate students in Professor Cote's lab.

Finally, while in Colombia, Dr. Rumbeiha visited the National Health Institute of Colombia, also in Bogota. He was hosted by David Andres Combariza, Director of the Center for Occupational Health Laboratory. Dr. Combariza pointed out two areas where his lab seeks collaboration. First is environmental research on the impact of heavy metal pollution from mining activities. Second, he indicated that Colombia uses a lot of pesticides for agriculture, and there is a need to educate locals on proper pesticide use practices. Dr. Rumbeiha concurred with Dr. Combariza that this is one area where Toxicologists Without Borders could provide assistance.

In summary, a seed has been planted by SOT in Colombia. Both Dr. Rumbeiha and Professor Diaz are continuing their engagements. Both are optimistic that there will be increased interest to join SOT from Colombia. Areas of joint collaborations identified include training of students at the PhD level, environmental toxicology research, and pesticide use education for local users. SOT members interested in collaborating with the National University of Colombia or with the Center for Occupational Health Laboratory, National Health Institute of Colombia, can contact either Dr. Rumbeiha or Professor Diaz.

Watch for announcements concerning funding of the Global Senior Scholar Exchange Program in 2015–2016.

New SOT Issue Statement on Hookah Water Pipe Use

On February 2, 2015, the Society of Toxicology (SOT) Council approved a new SOT Issue Statement on hookah water pipe use. SOT Council would like to thank the writing team of Judith T. Zelikoff, Terry Gordon, Anthony R. Schatz, Clive Meredith, Laura S. Van Winkle, and nonmember Michael L. Weitzman for their work in drafting the statement.

The Issue Statement was developed under the Issue Statement procedure that was approved by SOT Council in 2010. As part of the approval process, SOT membership was given the opportunity to review and offer feedback on the draft statement in November 2014. The Hookah Issue Statement Writing Team wants to thank the members who supplied comments on the earlier draft. The comments were considered and represented in the final version approved by Council.

Upon the Issue Statement's approval on February 2, a number of actions were taken by SOT and members to share the information contained within the Hookah Issue Statement:

- The Issue Statement was posted to the SOT website.
- A press release on the Issue Statement was distributed through two mainstream media wire services and a wire service dedicated to college newspaper editors. The topic also was pitched to a handful of selected reporters.
- A newspaper-style, shortened version of the piece was distributed through a service called NAPS, which places editorial articles in newspapers and online sites.
- Postings were made to the SOT Facebook and Twitter accounts.
- SOT President Norbert E. Kaminski sent an email to SOT membership asking everyone to share graphics on hookah with their followers on social media. Thank you to everyone who has shared the content thus far.

SOT Council hopes to continue the reach of the Hookah Issue Statement by continuing to share information from it through various communication channels in the coming months/years.

If you would like to suggest a topic for the next SOT Issue Statement, please review the SOT Statements Procedure and

submit a proposal form.

Warm Up Your Profile—Upload or Update Your ToXchange Profile Picture Today!

Given the arctic temperatures this year, we are all looking for activities we can do inside our warm homes and offices. Why not post your profile picture to your ToXchange MyPage and get recognized!

Last December, the Society of Toxicology rolled out its second annual ToXchange Component Group Profile Picture contest. In January, the winners were announced based on three levels of membership numbers. The winning group from each level won $500 in travel support to the SOT 2015 Annual Meeting. By uploading your profile picture, not only are you allowing yourself to be recognized by other members searching for you, you could be contributing to your group's success!

SOT members search for other members the most in the months before the SOT Annual Meeting. Share your accomplishments and your smile—upload or update your profile picture today.

Here's how:

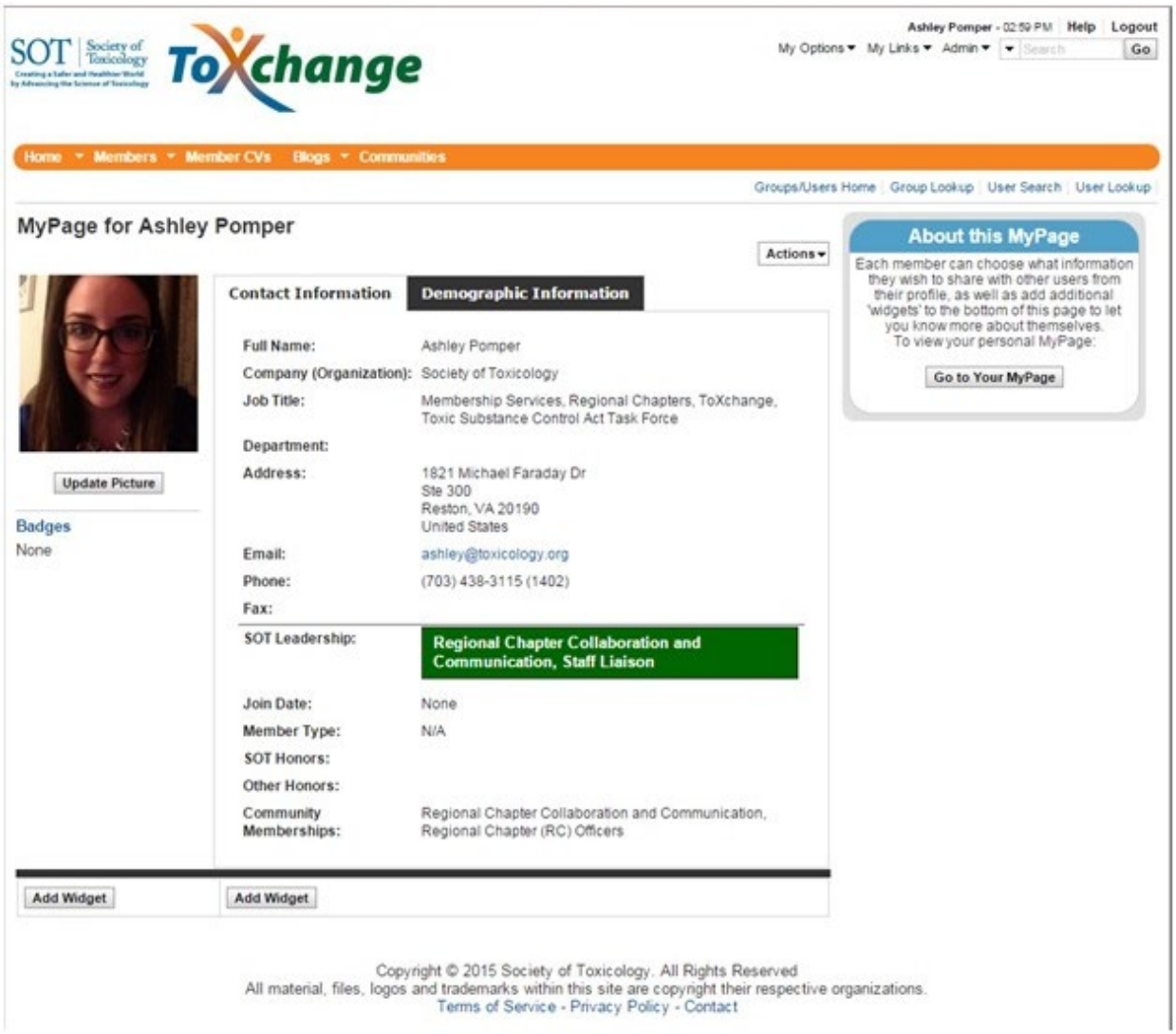
Go to your MyPage:

1) From the My Options drop-down in the upper right corner, select MyPage.

OR

2) From your profile page, click on the "MyPage" button at the top of the "About this User" box on the right.

This is what your My Page looks like:



Update your picture!

First, be sure to know where your picture file is located so that you can easily browse and select it to upload.

1) On your MyPage, click the "Actions" button and select “Update Picture.”

2) Click the "Update File" button and browse for the picture file on your computer. You may upload a file as large as 2 MB only (most photos are between 1.0–1.5 MB).

3) Click the OK button to upload your selected picture.

It’s as easy as 1-2-3! If you need help, just click on “Help” in the top right of your ToXchange page—OR—just write in your question below and we’ll write a response to help you out.

*ToXchange—It’s **Your** Network!*

2015 STEP Award Funding Available for Graduate Students to Enhance Career Preparation

The Society of Toxicology (SOT) Graduate Education Subcommittee and Education Committee are offering a third round of funding for professional development activites to obtain additional training that enhances career opportunities.

This third round of Supplemental Training for Education Program (STEP) funding will provide approximately four awards of up to $1,000 each to enable outstanding doctoral students to pursue training in identified areas of professional/scientific development that are necessary for them to achieve their career goals but outside the immediate scope of their graduate training and research program. Two recent recipients will be announced soon.

Those funded previously were featured in *Communiqué* blogs.

Alexandra Munoz, New York University Medical Center, SOT STEP Awardee Explores Mathematical Frameworks for Paradigmatic Inspiration

Rance Nault, Michigan State, Commercial Potential of Research: SOT STEP Funds Participation in Entrepreneurship Academy

Matthew Wolter, University of Wisconsin-Milwaukee, The Art of Becoming a Strong Risk Communicator: Training Opportunity Funded by SOT STEP

Experiences such as those described above or similar to the examples below might be proposed.

- Professional development courses geared toward government-based specialties
- Writing skill enhancement
- PK training
- Statistical and software training
- Grant writing and management opportunities
- Risk assessment skill development

Application Deadline is May 15, 2015.

Help SOT Identify Research Experience Opportunities

Often acknowledged as the best way to increase interest in graduate school, research internships can be life-changing. The Society of Toxicology (SOT) helps students find research experiences related to toxicology by providing listings at Student Research Internships in Toxicology, including the categories Student Research Internships in Toxicology, Governmental Internship Opportunities, and Other Internship Opportunities for other environmental and biomedical experiences.

Many academic institutions and companies have research opportunities that never reach the SOT webpages. The listings we do have need updating for 2015. We encourage you to send information immediately to Betty Eidemiller for adding to the SOT website. Even if the student research program in your institution is not solely toxicology-related, we would like information about it.

At the beginning of next year, we will be sending a message to our undergraduate contact list, including SOT Undergraduate Affiliates, directing them to the SOT Internship page so they can apply for opportunities in advance of the deadlines for summer 2015.

Thank you for your assistance in providing research opportunities to students.

Putting Your Society's Financial Reserves to Work

Submitted by SOT 2013–2015 Treasurer Denise Robinson Gravatt and 2014–2015 Treasurer-Elect George P. Daston

The Society of Toxicology (SOT) formally started a reserve fund in 1994, responding to the downturn in the economy and with the intent of implementing fiscally responsible practices to ensure the long-term stability of the Society. The

purpose of the Reserve Fund is to protect and preserve the Society and to ensure that SOT can pay its bills in the event of a catastrophic event (such as cancellation of an Annual Meeting). It is typical practice for non-profit organizations to have a financial reserve equivalent to 75%–100% of the annual budget.

While SOT is a not-for-profit organization, revenue is generated from the journal, the Annual Meeting, and membership dues to provide funding for our various activities. Some of this revenue also has been utilized to build the Reserve Fund over time. SOT's financial policies dictate a Reserve Fund of 75%–150% of the annual operating budget. In recent years, the Reserve Fund has reached these limits, and funds in excess have been transferred to the Supportive Fund. The purpose of the Supportive Fund is to provide investment income to sustain ongoing programs that further the mission of the Society: "creating a safer and healthier world by advancing the science of toxicology."

The Reserve Fund has a conservative investment strategy, in keeping with its purpose of providing financial stability for the Society. The Supportive Fund has a somewhat less conservative investment strategy, reflecting its purpose of portfolio growth and income generation. Under Council's guidance, the investment income generated from the reserves has been used for a variety of purposes, such as matching member contributions to help our Endowment Fund grow, providing funds for the 50th Anniversary celebration and other strategic activities, and, in lean years, to help balance the budget.

Given that the Reserve Fund has grown substantially, it was considered that the excess funds could be put to more active use for SOT strategic initiatives. After significant deliberation, SOT Council approved a recommendation from the Finance Committee that the Reserve Fund be reduced and the funds in excess of 110% of the current operating budget be moved into the Supportive Fund. The investment policy of the Supportive Fund will enable it to more actively generate revenue for SOT's Emerging Initiatives and other short- to mid-range activities in support of SOT's strategic plan. The policies governing the Supportive Fund also were reframed to align and clarify its purpose as a Strategic Initiatives resource.

As Council completes its work this year on the Society's new strategic plan, having a fund with a dedicated purpose provides a transparent mechanism and specific resources for limited duration strategic initiatives and enables the costs of these initiatives to be supported by investment income rather than adding to the bottom line of the operating budget. This approach is both fiscally responsible and has the potential to make our Society's resources work even more effectively and efficiently for our future.

In Memoriam

In Memoriam

Donald R. Buhler

Edward W. Carney

John Higginson

Tee Smith

Aurelio Pasi

In Memoriam: Donald R. Buhler

By Cristobal L. Miranda, David E. Williams, and A. Jay Gandolfi

Donald R. Buhler, the first Chairman of the Toxicology Program and a professor in the Department of Environmental

and Molecular Toxicology and Environmental Health Sciences Center at Oregon State University (OSU), passed away in Portland, Oregon, on September 10, 2014, at the age of 88. Don obtained his BS (1950), MS (1953), and PhD (1956) from Oregon State College. After a postdoctoral position at the Oregon Medical School, he held positions at the US Fish and Wildlife Service, Upjohn Company, and Battelle-Northwest.

In 1967, Don joined OSU in the Department of Agricultural Chemistry and Environmental Health Sciences Center. In 1974, he became a full professor and then in 1983, he was appointed as the first Chairman of the graduate Toxicology Program and held this post until 1994.

At OSU, Don was a passionate teacher and researcher who did pioneering work in diverse areas of health-related research such as hop flavonoids, pyrrolizidine alkaloids, pesticides, heavy metals, hexachlorophene, hepatic porphyria, and xenobiotic-metabolizing enzymes using various animal models including rats, rabbits, Japanese quail, rainbow trout, zebrafish, leaping mullet, sea lion, and other aquatic organisms. Besides research, Don contributed heavily to local, national, and international toxicology- and health-related activities. He served on the Editorial Boards of *Aquatic Toxicology*, *Toxicology and Applied Pharmacology*, and *Journal of Toxicology and Environmental Health*.

Don served as a member of the National Institutes of Health (NIH) Toxicology Study Section and various NIH Special Study Sections, National Academy of Science/National Research Council Safe Drinking Water Committee, US Environmental Protection Agency FIFRA Scientific Advisory Panel, and NMFS Marine Pollution Assessment Grant Review Panel. He was a past president of the Pacific Northwest Regional Chapter of the Society of Toxicology (SOT). He was a member of several professional societies such as SOT, Society of Environmental Toxicology and Chemistry, International Union of Toxicology, International Society for the Study of Xenobiotics, American Society of Biological Chemists, American Chemical Society (ACS), and the American Society for Pharmacology and Experimental Therapeutics. He actively participated in these societies by serving on various committees and functions.

He was a mentor to many successful graduate students and postdoctoral research associates. He instilled in them the merits of academia and the professionalism to succeed in all scientific endeavors. Many of his past advisees became leaders of academic toxicology programs, elected officers in professional societies such as SOT, editors of scientific journals, and directors of research programs in the pharmaceutical industries.

Don was known for his extensive collaboration with professors/scientists from all over the world. His diverse research interests resulted in his interactions all across the OSU campus. He also reached out to colleagues throughout the US and around the world to produce the best research publications.

He was a highly productive researcher, publishing more than 200 papers in peer-reviewed scientific journals. In addition, Don and Donald J. Reed, an OSU biochemistry professor and past President of SOT, authored a book, entitled *Ethel Browning's Toxicity and Metabolism of Industrial Solvents* published by Elsevier in 1990. Don's research on the purification, characterization, and cloning of various forms of cytochrome P450 and flavin-containing monooxygenase in rainbow trout and zebrafish undoubtedly enhanced the utility of these fish species as non-mammalian models of human disease. He also made important contributions to the understanding of the metabolism of pyrrolizidine alkaloids, hexachlorophene, and other halogenated aromatic compounds in various animal species.

Don's excellence in teaching and research earned him the Ferguson Distinguished Professor of Agricultural Science Award at OSU. He also received the Newsmaker Award from the ACS in 2001 at its annual meeting for publishing a research paper on the antioxidant activity of prenylflavonoids that are found in hops and beer.

One particular attribute that many students and colleagues remember fondly was Don's hospitality and generosity to international students and visiting faculty new to Corvallis. Often, they would stay in his home until they found a residence and he would even loan them a car if needed. If they planned on staying long-term, his wife and colleague, Jun-Lan Wang, would donate her time as a realtor helping them to get housing. You were in good hands with the Buhlers if you arrived in the US with little or nothing in the way of financial support.

Although Don retired in 2003 with Professor Emeritus status at OSU, he continued to actively pursue his passion for research and remained on the Editorial Board of several Toxicology journals and on NIH Study Sections.

Don is survived by his loving wife, Jun-Lan Wang, who worked with him in the lab for 30 years. Don also is survived

by four children, three grandchildren, and one great grandson.

In Memoriam: Edward W. Carney

The Society of Toxicology (SOT) has learned of the passing of Edward W. Carney on January 12, 2015. He held the position of Scientific Director–Toxicology Research, Dow Chemical Company, Midland, Michigan. He was a Past President of the SOT Reproductive and Developmental Toxicology Speciality Section (SS) and a member of the Mixtures SS and the Michigan Regional Chapter of the Society. In addition, he was also a member of the Organizing Committee of the SOT Contemporary Concepts in Toxicology (CCT) Conference, FutureTox II: *In Vitro* and *In Silico* Models for Predictive Toxicology. He joined SOT in 1999. For additional information about the distinguished life of Dr. Carney, please view his obituary.

In Memoriam: John Higginson

The Society of Toxicology (SOT) has learned of the passing of John Higginson on September 25, 2013. He served as the Director of the International Agency for Research on Cancer (IARC) from 1966–1981. He provided a brief history of IARC in a 1998 Forum article in *Toxicological Sciences*, The International Agency for Research on Cancer.

Dr. Higginson was born in Belfast, Northern Ireland, in 1922 and attended the Royal Belfast Academical Instituion and Trinity College, Dublin, where he received a PhD in biology in and a doctorate in Medicine. He was a member of the Royal College of Physicians of London and served on committees of the National Academies of Sciences and the National Institutes of Health as well as the Union for International Cancer Control. He was an Emeritus Member of SOT, having joined the Society in 1970.

In Memoriam: Tee Smith

With immense charisma and unassuming presence, Tee Smith, brightened the lives of young scientists who entered the Carl C. Smith Graduate Student Award competition. This competition was established in 1982 as the first-ever graduate student award sponsored by SOT under the auspices of the Mechanisms Specialty Section. Its rigorous standards of excellence served to inspire the achievements of many at the individual and collective levels. The award was not only among the first Society efforts to recognize excellence in toxicological research, but also became a foundational process for the evolution of organized fund raising efforts within the Society. Tee and her late husband, Carl, single-handedly oversaw the graduate student competition process from their home office for many years and presented the awards year-after-year to winners at the Annual Meeting, even during retirement. Due to their strong aversion for flying, they traveled long distances by car to attend the Annual Meeting to enrich the lives of members of the Mechanisms Specialty Section and to directly interact with students competing in the program. Their vision, passion, and dedication inspired many within the Society and beyond. Today, we stand together to applaud Tee's efforts and to express our gratitude for all that she gave of herself to enrich the lives of others. Her legacy will continue to live on…

Ken Ramos, MD, PhD, ATS
2008-2009 President of the Society of Toxicology
1982 Honorable Mention, Graduate Student Award Competition

In Memoriam: Aurelio Pasi

The Society of Toxicology (SOT) has learned of the passing of Aurelio Pasi of Zurich, Switzerland. Dr. Pasi was a Full member of the Society. He joined SOT in 1982 and was a member of the Comparative and Veterinary Specialty Section.

Regional Chapters, Special Interest Groups, and Specialty Sections

Announcing the Winner of the ToXchange Profile Picture Contest

As announced in December 2014, the Society of Toxicology has been encouraging every member to upload or update his/her profile picture on ToXchange. To provide additional incentive to do so by the end of 2014, we launched a year-end ToXchange Profile Picture Contest. Every Regional Chapter, Special Interest Group, and Specialty Section was automatically entered in the contest with the goal to achieve the highest percentage of their component group members to upload or update a profile picture by January 1, 2015.

The Prizes

Component groups with the highest percentage of member profile pictures posted by January 1, 2015, will receive an award stipend of $500 as travel support funds to the SOT Annual Meeting—to be dispersed at the discretion of the component group.

As component groups vary in the number of members, three levels of the competition were defined as follows:

A) Component Groups with up to 100 members.

B) Component Groups with 101–200 members.

C) Component Groups with more than 201 members.

The Winners

"Up to 100 members" Winner: **South Central Regional Chapter** with 40.27% of members' photos uploaded

"Up to 200 members" Winner: **Metals Specialty Section** with 41.21% of members' photos uploaded

"More than 201 members" Winner: **Mechanisms Specialty Section** with 38.37% of members' photos uploaded

Congratulations to the winning groups who will receive $500 each in travel support funds to the SOT 2015 Annual Meeting.

A special mention goes to the following component groups who exceeded 35% in members' photos uploaded:

- Central States Regional Chapter
- Clinical and Translational Toxicology Specialty Section
- Association of Scientists of Indian Origin (ASIO) Special Interest Group
- Hispanic Organization of Toxicologists (HOT) Special Interest Group
- Molecular and Systems Biology Specialty Section
- *In Vitro* and Alternative *Methods Specialty Section*
- Women in Toxicology (WIT) Special Interest Group

If you have not uploaded your profile picture on ToXchange, why not do it now? Go ahead, get recognized! You just might find it to be an "awarding" experience.

Now is the perfect time to post your profile picture, because the closer we get to the Annual Meeting (March 22–26, 2015), the more member searches there are in ToXchange. So put your face with your name, upload your profile picture today! Here's how:

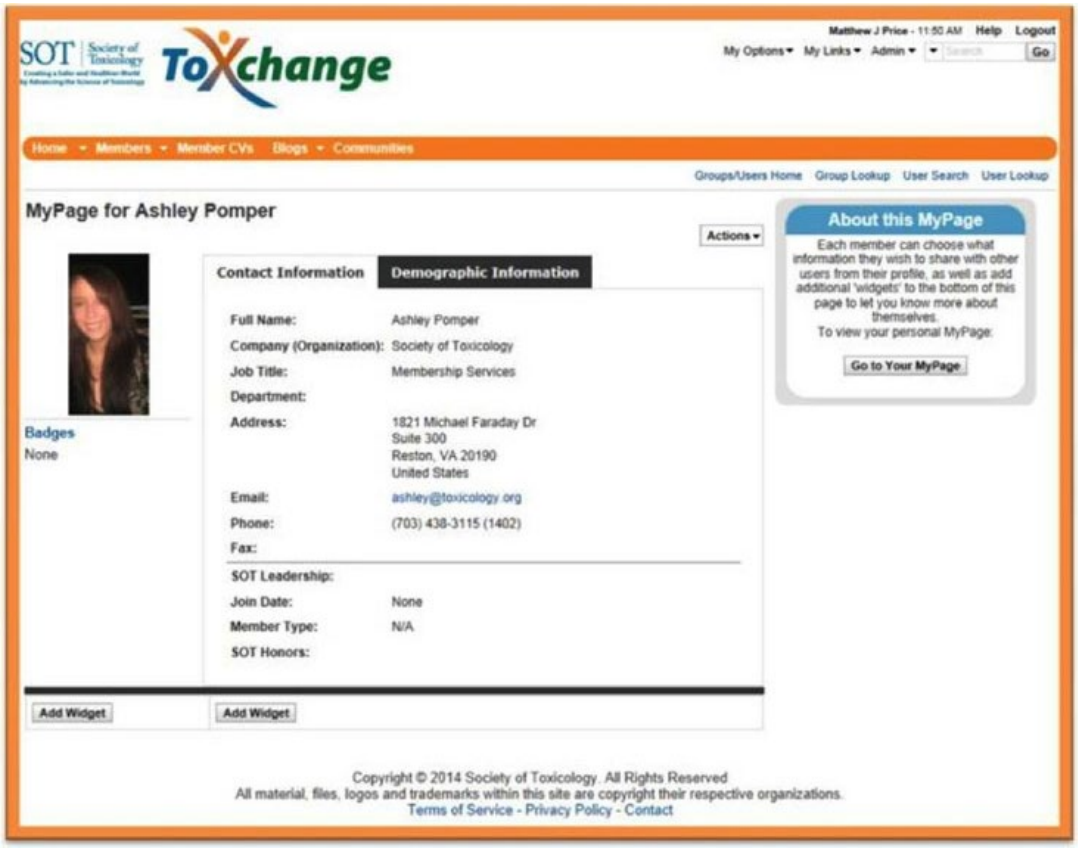
Go to Your MyPage:

1) From the My Options drop-down in the upper right corner, select MyPage.

OR

2) From your profile page, click on the "My Picture" button at the bottom of the "About this User" box on the right.

This is what your My Page looks like:



Update Your Picture!

First, be sure to know where your picture file is located so that you may easily browse and select it to upload.

1) On your MyPage, click the "Actions" button and select "Update Picture."

2) Click the "Update File" button and browse for the picture file on your computer. You may upload a file as large as 2 MB only (most photos are between 1.0–1.5 MB).

3) Click the OK button to upload your selected picture.

It's as easy as 1-2-3! If you need help, just click on "***Help***" in the top right of your ToXchange page—OR—just write in your question below and we'll write a response to help you out. ToXchange—It's ***Your*** Network!

Annual Meeting & ToxExpo

Top Reasons to Attend SOT Annual Meeting, March 22–26, 2015, San Diego, California

Reason #1: Knowledge
Expand your knowledge and learn about the latest scientific advances in the field of toxicology. The Society of Toxicology (SOT) Annual Meeting provides countless opportunities for learning and the scientific sessions deliver a current, relevant, and comprehensive program.

Reason #2: Networking
It's a word we hear and use often, but it means different things to different people. For some attendees, it means

catching up with colleagues and friends. Both attendees and many ToxExpo exhibitors express that networking is among their top reasons for attending—making new industry contacts as well as connecting with previous acquaintances. Students also tell us that connecting with potential employers and rubbing shoulders with industry leaders makes the meeting invaluable for them. Whatever your networking goals, attending the SOT Annual Meeting can help you achieve them.

Reason #3: Certification Credits
Attend Continuing Education courses that offer a wide range of specialized educational topics in toxicology. Course credits can be applied toward certification and licensing board requirements and may be used for re-certification with the American Board of Toxicology. Additionally, the Society offers certified medical credits for some of the Annual Meeting sessions.

Reason #4: Advances in Toxicology
Each year, the highly regarded scientific program covers diverse areas within the science of toxicology. The program highlights scientific advances of the past year, giving toxicologists the most up-to-date program possible.

Reason #5: Find Solutions to Your Lab Needs
Are you looking for new or updated lab equipment or instruments? On the ToxExpo exhibit floor you can visit face-to-face with suppliers and view demonstrations of new products to help solve your real world equipment and technology needs.

Reason #6: Make Yourself More Valuable
The SOT Annual Meeting is the largest meeting of its kind that offers education, scientific lectures, round-table discussions, poster presentations, and an industry focused exhibition. Every day offers another opportunity to enhance and enrich your personal and professional experience.

Reason #7: Meet SOT Members
SOT is comprised of over 7,800 members and the Annual Meeting is a fantastic chance to meet and mingle with them. When you attend, you'll have a chance to see why they benefit from being a member of SOT.

Reason #8: Value
Your SOT registration includes access to an incredible amount of science with symposia, roundtables, workshops, a plenary lecture by notable scholars (in 2015 J. Craig Venter), Welcome Reception, access to ToxExpo, a Mobile Event App, over 2,800 abstracts, ePosters, and a chance to connect with fellow attendees—an immense value!

Reason #9: Visit the ToxExpo Exhibit Hall
Working in science means being curious by nature. Trade shows provide a first-hand opportunity to learn about the latest technologies and services. ToxExpo provides you a great opportunity to keep up to date on the newest products available.

Reason #10: Location, Location, Location
San Diego’s beautiful convention center sits right on sparkling San Diego Bay and across the street from exciting downtown. Explore the dining and the urban excitement of the Gaslamp Quarter and stroll along the waterfront. It’s all within steps of the Convention Center.

Have SOT 2015 At Your Fingertips—Use the Mobile Event App

This year we are happy to announce an enhanced Mobile Event App and Online Planner. These tools offer you multiplatform mobile solutions for the SOT Annual Meeting and ToxExpo, provided free of charge to attendees and exhibitors. The Mobile Event App and Online Planner are available via the SOT website and app marketplaces. These mobile tools enable you, the attendee, to engage with organizers, exhibitors, and each other, and to manage your time

and maximize your experience while at the Annual Meeting.

The Mobile Event App allows you to:

- Connect with fellow attendees
- Build your own schedule and synchronize from the Online Planner to your iPad, tablet, and smartphone simply by logging in
- View presentation details and abstracts
- Add individual presentations or entire sessions to your schedule
- Boolean search for items based on session title, abstract title, abstract keywords, thematic track, and author name or affiliation
- View award recipients and featured speakers
- Access the San Diego city guide including hotels, restaurants, attractions, nightlife, and shopping
- View the San Diego Convention Center map
- Navigate the real-time ToxExpo floor plan and search by product categories and exhibitors
- Integrate with ToXchange, Twitter, and Facebook
- Scan QR codes quickly and easily within the app

The Online Planner features:

- Boolean search schedule and ToxExpo
- Separate speaker and abstract tabs
- Schedule export for iCal and PDF
- Schedule sync with Mobile Event App

How Do I Install the App and Access the Online Planner?

iOS 6 and higher: Open the App Store and search for the app by entering SOT 2015. Press the Free or Install button.

Android 4 and higher: Open the Google Play app and search for the app by entering SOT 2015. Select Download and open the app after the download has completed. Developed for Android 4 and higher (older Android versions have very limited disk space and may prompt to delete other apps on the device before installing a new app).

Kindle Fire: From the Home screen, select Apps, select Store, and enter the SOT 2015 in the Search field. Select Free, then Get App to install.

BlackBerry (version 6.0+) or Windows Phone 7: Open the browser on the device. Navigate to http://ativ.me/sot15w

Online Planner: Access the Online Planner to build your custom schedule via the computer, download to print or sync with your iCal and/or sync to your device at any time. The Online Planner has optimal functionality using **Chrome**.

The Online Planner and Mobile Event App will prompt for a username and password before allowing users to access certain features, which include: “My Schedule” and “Attendee Messaging." **Only Annual Meeting registrants will have access to these restricted features.** SOT Member registrants use their SOT membership login credentials for full access. SOT non-member registrants use their email and password, which was used to register for the meeting to gain full access. At any time, use the password reminder on the SOT website login to have your password sent to your email address (the email address used to register for the meeting). Your name will display at the top of the app when you are logged in. Contact SOT Headquarters if you need assistance with your password.

Learn How to Use the App and Online Planner

You're Invited to the App and Online Planner overview webinar. Can't make this date? A recording of the webinar will be accessible from the SOT website following the webinar or view the two-minute overview video from the link below or from the YouTube icon on the dashboard of the app.

Tuesday, March 10, 2015, 11:00 AM ET
Join the Webinar (no advanced regsitration required)

View the App Overview: SOT 2015 Mobile Event App Overview

Plenary Opening Lecture: J. Craig Venter

Renowned biologist J. Craig Venter will deliver the Plenary Opening Lecture, "Life at the Speed of Light," at the SOT 2015 Annual Meeting on Monday, March 23, 8:00 am–9:00 am in San Diego, California. He is known for his contributions in sequencing the first draft human genome in 2001, the first complete diploid human genome in 2007, and construction of the first synthetic bacterial cell in 2010.

"Dr. Venter is a leading visionary and researcher in the field of genomics, and we are honored that he will be speaking at our 54th Annual Meeting," said SOT Peter Goering, 2014–2015 Vice President and Scientific Program Committee Chair. "His work in genomics represents a solid foundation upon which toxicologists can develop better research into how different drug and chemical exposures impact human health."

He is founder, chairman and CEO of the J. Craig Venter Institute (JCVI); founder and CEO of the company Synthetic Genomics Inc (SGI), and co-founder and CEO of Human Longevity Inc (HLI). Dr. Venter and his teams are focused on a variety of projects and programs, including synthetic genomic research and the application of these advances to develop new biofuels, vaccines, and food and nutritional products; continued analysis of the human genome, including the human microbiome; and discovering and understanding genetic diversity in the world's oceans.

Dr. Venter is one of the most frequently cited scientists and the author of more than 250 research articles. He also is the recipient of numerous honorary degrees, public honors, and scientific awards, including the 2008 United States National Medal of Science, the 2002 Gairdner Foundation International Award, the 2001 Paul Ehrlich and Ludwig Darmstaedter Prize, and the King Faisal International Award for Science. He is a member of numerous prestigious scientific organizations, including the National Academy of Sciences, the American Academy of Arts and Sciences, and the American Society for Microbiology. Moreover, he is the author of *Life at the Speed of Light: From the Double Helix to the Dawn of Digital Life* (Viking, 2013) and *A Life Decoded: My Genome: My Life* (Viking, 2007).

Keynote MRC Lecture: Brigitta Stockinger

On Wednesday, March 25, 8:00 am–9:00 am, Brigitta Stockinger will deliver the Keynote Medical Research Council (MRC) Council Keynote Lecture, "Environmental Influences on the Immune System via the Aryl Hydrocarbon Receptor." The aryl hydrocarbon receptor (AhR), well known in the pharmacology/toxicology field for its role in mediating the toxicity of xenobiotics, has more recently attracted the attention of immunologists. The evolutionary conservation of this transcription factor and its widespread expression in the immune system point to important physiological functions that are slowly being unravelled.

In particular, the emphasis is now shifting from the role of AhR in the xenobiotic pathway toward its mode of action in response to physiological ligands. The current focus in the field is on understanding the molecular interactions and functions of AhR in the immune system in steady state and in the presence of infection and inflammation, particularly in barrier organs such as the skin, the gut, and the lung.

Dr. Stockinger obtained her PhD in biology at the University of Mainz, and did postdoctoral training in London, Cambridge (UK), and at the Cancer Research Institute in Heidelberg. In 1985, she became a member of the Basel Institute for Immunology. In 1991, she became a group leader in the Division of Molecular Immunology of the National

Institute for Medical Research in Mill Hill. Her research initially focused on immune tolerance using T cell receptor transgenic mouse models.

The current research focus of her laboratory at the MRC National Institute for Medical Research, London, United Kingdom, is on T cell biology, understanding the development, differentiation, and function of peripheral CD4 T cell subsets, as well as the physiological functions of the aryl hydrocarbon receptor in the immune system. Dr. Stockinger obtained an ERC Advanced Investigator grant in 2009 to study physiological functions of AhR and in 2013 was awarded a Wellcome Senior Investigator Grant that will continue and expand the investigation of AhR in innate and adaptive immune cells. She became a Fellow of the Academy of Medical Sciences in 2005, an EMBO fellow in 2008, and a Fellow of the Royal Society in 2013.

SOT Frontiers for Toxicology: Special Symposium Session

By Peter L. Goering, Scientific Program Committee Chair

The Frontiers for Toxicology Symposium is designed to focus on a cutting-edge subject that impacts basic and applied toxicology research. The topic for 2015 is "Bugs to Drugs: The Microbiome in Human Health, Disease, and Therapeutics," which will be held on Tuesday, March 24, 9:00 am–12:00 noon. The human microbiome represents a symbiotic ecosystem that plays a key role in host metabolism and physiology, and is incredibly diverse even between healthy individuals.

Dysfunctional microbiomes in various host environments are being increasingly recognized in the pathogenesis of altered metabolic states and diseases, such as metabolic syndrome, obesity, diabetes, certain autoimmune disorders, atherosclerosis, autism, asthma, and allergies. In particular, the gut microbiome plays a role in metabolism and absorption of drugs, toxicants, environmental chemicals, and dietary components; these exposures also alter the microbiota species composition and microbiome.

Breakthroughs in analytical methods and tools have accelerated the understanding of the roles of the microbiome in human health and disease. Metagenomics represents a powerful approach to define the microbiota species composition in a given ecosystem through detection of their genes and gene products, and the role of altered microbiomes in disease. Vast microbiota diversity exists within and between humans, each population producing a large array of their own metabolites and products, which contributes to regulating the overall host biology within this symbiotic relationship. Metabolic profiling strategies, including new mass spectrometric and bioinformatics techniques, are being developed to analyze the microbial metabolome to generate chemical maps that describe the molecular connections and communications between host cells and microbes. Understanding microbiome-metabolome-host interactions will drive the identification of novel drug targets and development of new therapeutic interventions for many diseases.

Rapid advances linking microbiota, the microbiome, and metabolome and their role in health and disease represent an important frontier from a toxicological perspective. The goal of this session is to feature eminent scientists who have made important contributions and advances to current knowledge of the microbiome. Integrated areas that will be explored include metagenomic characterization of microbiomes in human and environmental ecosystems, changes in the microbiome from birth to death and important applications to forensics, the molecular characterization of the microbiome and the challenges of linking large amounts of genome sequencing and mass spectrometric data, and the metabolic cross-talk between the host and the symbiotic microbiome and its influence on disease and therapeutic, personalized medicine interventions.

Speakers in this session include Mark D. Adams, J. Craig Venter Institute, San Diego, California; Rob Knight, University of California San Diego, San Diego, California; Pieter C. Dorrestein, University of California San Diego, San Diego, California; and Jeremy K. Nicholson, Imperial College London, London, United Kingdom.

A Conversation with Dr. Linda S. Birnbaum and Jim Jones

This important session on Monday, March 23, 1:30 pm–2:30 pm, will provide an informal venue for meeting attendees to have a candid and open discussion with two key leaders of federal organizations with missions to protect and improve public and environmental health:

Linda S. Birnbaum, Director, National Institute of Environmental Health Sciences (NIEHS) and National Toxicology Program (NTP) and Jim Jones, Assistant Administrator, US Environmental Protection Agency (EPA), Office of Chemical Safety and Pollution Prevention (OCSPP).

The entire session will be devoted to a question-and-answer format concerning scientific directions and priorities for NIEHS and US EPA-OCPP.

26th Annual SOT Undergraduate Education Program Welcomes Outstanding Students

By Kristini Miles, Committee on Diversity Initiatives Chair

The Committee on Diversity Initiatives (CDI) will hold its 26th Annual SOT Undergraduate Education Program this year in San Diego. Undergraduate students from diverse backgrounds and institutions underserved in the sciences are selected to attend the program to learn about the field of toxicology and be encouraged to pursue careers in the biomedical sciences.

The CDI will host 33 outstanding students and five advisors from 29 different institutions. Among the activities are special toxicology presentations: the speakers include Jared Brown, Joshua Gray, Marquea King, Kenneth Ramos, and Alice Villalobos. The program also will include mentoring, poster sessions, and discussions about applying for and succeeding in graduate school and career opportunities.

It takes a tremendous effort every year from the dedicated volunteers—committee members, presenters, toxicologist host mentors, student/postdoctoral peer mentors, faculty and research mentors, and others who give their time so generously to support the program and inspire the next generation of young scientists.

Undergraduates Find Special Activities at the 2015 Annual Meeting

By Richard S. Pollenz, Education Committee Chair

Undergraduates who attend this year's Society of Toxicology Annual Meeting can participate in a Scavenger Hunt. The event is intended to promote networking with scientists, and students will engage with the presenters while they are visiting poster and scientific sessions to have their Scavenger Hunt Cards signed. Scavenger Hunt Cards can be printed from the Annual Meeting website or picked up from Registration or the SOT Headquarters Office.

Completed cards are due back Tuesday afternoon, March 24, 2015, with prizes going to the first 100 turned in completed. Cards may be returned during the Undergraduate Student meeting or to Registration or the SOT Headquarters Office. The Undergraduate Education Subcommittee has organized this activity and appreciates those meeting attendees who sign cards for undergraduates when approached. The Undergraduate Subcommittee also is hosting a

meeting for undergraduate students at 4:00 pm–5:00 pm on Tuesday in Room 14A.

All undergraduates who register for the Annual Meeting also can register for the Sunday Undergraduate Education Program. Organized by the Committee on Diversity Initiatives (CDI), the Sunday schedule includes special lectures on toxicology topics and a case study as well as breakout groups exploring ways to be successful when applying to graduate school, time with academic program directors and internship hosts, and roundtable discussions with toxicologists in different employment sectors.

The Education Committee also selected a number of students who will receive special accolades for their abstract submissions and other accomplishments. Fourteen students will be recognized with the Pfizer SOT Undergraduate Travel Award and two students who earned internship support from SOT last summer have received the SOT Undergraduate Intern Travel Award. These students will display identifying ribbons on their posters and meeting attendees are encouraged to look for these ribbons and engage these scientists in discussion of their work. In addition to funding from Pfizer and SOT, the SOT Endowment Fund also supports these awards.

The Education Committee works with the CDI to integrate the various SOT activities directed toward undergraduates, including the Undergraduate Education Program, Domestic ToxScholar Grants, and support for internship experiences. The Undergraduate Education Program at the Annual Meeting serves as the centerpiece to introduce students to the science of and careers in toxicology. Other SOT activities support continued interactions with students to encourage pursuit of careers in toxicology.

Webinar: Best Practices for 2016 Annual Meeting Proposal Submission and Review

The Scientific Program Committee values the input we receive from the membership, in particular the Special Interest Groups, Specialty Sections, SOT Committees, and Task Forces with respect to the Annual Meeting Program.

Therefore, please mark your calendar for Monday, March 9, 2015, to participate in a Best Practices Webinar from 2:00 pm–3:00 pm EDT. The SPC has continued this webinar based on the success of the event in the past four years.

We anticipate this webinar will provide an overview of the submission, review, and decision process and answer some of the frequently asked questions related to proposal submission.

We are aware of the exciting opportunities as well as challenges for the proposal developers and would like to discuss how we can continue to improve this process and make our SOT activities even stronger.

SOT Seeking Annual Meeting Reporters

With more than 160 scientific sessions and more than 2,400 abstracts at the 54th Annual Meeting and ToxExpo, San Diego is going to be a hub of new and interesting toxicological science March 22–26, 2015. To make sure all of our attendees and members experience as much of the great research and discussions as possible, we need your help!

We're recruiting SOT members to serve as an army of "reporters" during the Annual Meeting. These reporters will attend their choice of activities at the Annual Meeting, and throughout the week, they will deliver two or three written recaps about the activities they've attended. These recaps can be from a few short paragraphs to detailed, point-by-point recountings. Ultimately, we want them to be representative of each writer. For some, this may mean a conversational tone and style, and for others, it may be a persuasive argument or opinion.

For a sample of what our volunteers contributed last year, please visit the *Communiqué* blog. Many of these articles experienced more than 2,000 views online following the meeting!

Here's how the reporting works:

- Send a note to Liz Kasabian, SOT Communications Assistant, indicating your willingness to serve as an Annual Meeting reporter, as well as a list of 2–4 sessions you plan to attend and would be willing to recap for us. The program schedule can be found as a PDF on the 2015 Annual Meeting website or through the free Mobile Event App.
- We will confirm your "assignments" with you prior to the meeting, and you will receive an SOT Reporter ribbon to attach to your name badge.
- During the Annual Meeting, upon the completion of one of your assigned sessions, you will send your recap to Liz within five hours of the session ending, and she'll take it from there, posting the recaps to the *Communiqué*.

One of our goals with this effort is to capture the feel and excitement of the Annual Meeting through the experience of our member reporters. As such, when sending a list of what you'd like to cover for us, feel free to include a wide variety of items — Continuing Education Courses, Symposia, Workshops, Poster Sessions, Lectures, etc. Our main focus of this activity is on the Scientific Sessions, but if you are interested in covering something else, just let us know.

We're looking forward to seeing you in San Diego and are excited to make this year's SOT Annual Meeting and ToxExpo the best one yet!

ToxExpo—Exposition of the Toxicology Industry

ToxExpo is the toxicology profession's largest exposition, uniting attendees and exhibitors from around the world to exchange information on the latest products and services. More than 350 exhibitors display innovative technology and methods before more than 6,500 attendees. The benefits of ToxExpo extend far beyond the three-day event—resulting in beneficial partnerships for all parties.

Use the enhanced 2015 Mobile Event App to create a list of exhibitors with whom you want to connect at ToxExpo. You can search the exhibitor listing to view detailed exhibitor information and pinpoint their location on the interactive ToxExpo map. The exhibit hours are as follows:

Monday, March 23:	9:00 AM–4:30 PM
Tuesday, March 24:	8:30 AM–4:30 PM
Wednesday, March 25:	8:30 AM–4:30 PM

More than 60 Exhibitor-Hosted Sessions will be held during the Annual Meeting. See the Program, the ToxExpo Directory, the SOT Mobile Event App, or the event website for details.

ToxExpo is accessible to attendees and exhibitors throughout the calendar year by visiting the ToxExpo website. ToxExpo is a valuable tool for the policymaker, scientist, student, or anyone who is looking for the latest that toxicology has to offer.

ToxExpo Prize Drawings: $500 Each Day of 2015 SOT Annual Meeting

Expand your ToxExpo experience by visiting Exhibitors who are Diamond Level Supporters to learn about their products and services. While you are there, simply drop your business card in the prize drawing boxes located in their booths. A $500 American Express Gift card is awarded each day. Drawings take place Monday, Tuesday, and Wednesday in the Exhibit Hall. Listen for your name to be called at 12:00 noon.

See map in the SOT Annual Meeting Mobile Event App, the Program, and ToxExpo Directory for location of Diamond Sponsor Booths indicated by a diamond symbol ♦.

Global Gallery of Toxicology

Toxicology Societies from around the world are invited to participate in the Global Gallery of Toxicology. The Global Gallery is a poster presentation in the ToxExpo Exhibit Hall open, Monday, March 23 to Wednesday, March 25 during ToxExpo hours. Now in its fifth year, posters showcasing key information, accomplishments, and strategic initiatives of these societies will be on display in the Global Gallery. In addition, the 2015 Global Gallery has a special "*Representative Attended"* poster time of 11:45 am–12:15 pm on Monday, March 23. Attendees interested in collaboration and discussion with these societies are encouraged to attend. The goal of SOT and of all these societies is to further the science of toxicology to advance human health and disease prevention. If your organization is interested in participating, or, for more information, please contact Kevin Merritt.

2015 CE Course Spotlight: Is Synthetic Biology the Future of Toxicology? (PM10)

Submitted by Saber M. Hussain and Dan Huh, Chairpersons of the 2015 Continuing Education PM10 (CE) course

Do you want to develop next-generation *in vitro* systems that more closely mimic an accurate physiological environment? Interested in a human breathing lung-on-a-chip and the development of artificial respiratory devices? Or how about microengineered models of liver toxicology and microvascular systems-on-a-chip as a blood-brain barrier model? If so, enrolling in the SOT 2015 Continung Education (CE) course "Is Synthetic Biology the Future of Toxicology?" is for you!

This CE course will showcase current organ-on-a-chip research presented by world leaders in this emerging technology, which incorporates cell-to-cell communication coupled with dynamic flow of media or air, depending on cell type. In addition, because inhalation is a predominant route of toxicological exposure, this course will explore the design of an artificial nose that represents inhalation and the ability of a compound to cross the olfactory bulb in an effort to predict a neurotoxicity risk. The course is intended for pathologists, toxicologists, administrators, and regulatory personnel who may need to design, conduct, or review these complicated but increasingly worthwhile investigations.

We invite you to register for the PM10 CE course today! Access a full listing of the CE courses at the 2015 SOT Annual Meeting website.

Course Outline:

- Introduction: Saber M. Hussain, US Air Force, Wright-Patterson AFB, Ohio
- A Human Breathing Lung-on-a-Chip for Toxicology Studies: Dan Huh, University of Pennsylvania, Philadelphia, Pennsylvania
- Developing Microengineered Models of Liver Toxicology: Salman R. Khetani, Colorado State University, Fort Collins, Colorado
- Microvascular Systems on a Chip: Kapil Pant, CFD Research Corporation, Huntsville, Alabama
- Development of Artificial Respiratory Device for Nanomaterial Toxicity: Lei Kerr, Miami University, Miami, Ohio

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2015 CE Course Spotlight: Interpretation of Cardiovascular Safety Data in Toxicology Studies (PM09)

Submitted by John Kremer, Chairperson of the 2015 Continuing Education (CE) course PM09.

Cardiovascular safety liabilities continue to be a major cause of drug attrition in late-stage clinical trials and post-market approval. Preclinical studies are increasingly incorporating more rigorous cardiovascular evaluations to better understand drug-related changes in functional and toxicological endpoints. This Society of Toxicology (SOT) 2015 Annual Meeting Continuing Education (CE) course was designed for toxicologists who are looking to expand their knowledge on how to design and interpret these functional cardiovascular data (e.g., heart rate, blood pressure, electrocardiogram) along with traditional endpoints (e.g., pathology). The four presentations are:

- Study Design Considerations to Improve Cardiovascular Safety Assessment**,** John J. Kremer, Covance Laboratories Inc., Madison, Wisconsin
- Hemodynamic Data: Toward Maximal Information Extraction**,** Bari Olivier, Michigan State University, East Lansing, Michigan
- Pathologist Viewpoint on Mapping Physiological Data to Other Indices of Toxicity Including Histopathology, Wendy Halpern, Genentech, Inc., South San Francisco, California
- Doxorubicin in NHPs: A Case Study in Using Multiple Parameters to Assess CV Function as Part of a Toxicology Study, Michael Engwall, Amgen, Thousand Oaks, California

By attending this CE course, you should better understand the considerations and strategies in integrating cardiovascular endpoints in toxicology studies as well as real-world case-studies for interpretation of these data for drug safety assessment.

Visit the PM09 CE course website for full details, including speaker biographies!

We hope to see you in San Diego at the 2015 SOT Annual Meeting.

2015 CE Course Spotlight: Safety Evaluation of CNS Administered Therapeutics (AM04)

Submitted by Brian Vuillemenot and Sven Korte, Chairpersons of the 2015 Continuing Education course AM04.

Are you planning on developing a therapeutic molecule for direct Central Nervous System (CNS) administration? Interested in neurological diseases? Or just fascinated with everything to do with the miracle of evolution that is the human brain? If so, enrolling in the Society of Toxicology (SOT) 2015 Continuing Education (CE) course "Safety Evaluation of CNS Administered Therapeutics—Study Design, Dose Routes, and Data Interpretation" should be a no-brainer! Many neurological diseases are inadequately treated by conventional systemic drug delivery. Due to the recent increases in the prevalence of these diseases and the inability of most systemically administered therapies to cross the blood brain barrier, direct CNS delivery will play an increasing role in the treatment of neurological disease in the years to come.

Nonclinical safety evaluation of molecules administered directly to the CNS has many unique considerations compared to traditional assessment of systemically administered molecules. This CE course will feature the collective experience of world leaders in developing CNS administered therapeutics. They will discuss the technical challenges of preclinical intrathecal/intracerebroventricular/intraparenchymal studies, design of Investigational New Drug (IND)-enabling programs, evaluation of results, and considerations for special endpoints. The course is intended for pathologists, toxicologists, administrators, and regulatory personnel who may need to design, conduct, or review these complicated but increasingly worthwhile investigations.

We invite you to register for the AM04 CE course today! Access a full listing of the CE courses at the 2015 SOT Annual Meeting website.

2015 CE Course Spotlight: Toxicogenomics Meets Regulatory Decision-Making (PM13)

Submitted by Ivan Rusyn and Rusty Thomas, Chairpersons of the 2015 Continuing Education (CE) PM13 course.

Remember how much excitement there was ten years ago about genomics data in toxicology? The former Director of a major governmental institute, in a promotional video touting the wonders of toxicogenomics, has said (paraphrasing), "I guarantee you that in five years we will not be performing animal cancer bioassays, as genomics data from *in vitro* experiments would provide all the information necessary to make decisions about chemical's safety." Shouldn't we be there yet?

Perhaps the bar for the expectations was set too high, the cost of the experiments was too much, the reproducibility of the results was uneven, and the knowledge necessary to interpret the data was not commonplace. A decade later, the field of genomics is shifting to novel technology platforms, the familiarity of the toxicologists in dealing with complex big data has improved, and the costs and throughput are pushing the 'omics to the forefront of the next generation of data streams.

This course is designed to offer a fresh perspective on this field from the point of view of a decision-maker. Where can one use these data to make a decision about chemical safety? How to choose the experimental platform to "fit the purpose?" Can genomics be used for dose-response analysis? *Toxicogenomics Meets Regulatory Decision-Making: How to Get Past Heat Maps, Network/Pathway Diagrams, and 'Favorite' Genes* has been designed to help you navigate these real-life questions. Do not delay, register for the PM13 CE course today! Access a full listing of the CE courses at the 2015 SOT Annual Meeting website.

2015 CE Course Spotlight: Strategies in Investigative Toxicology in a Pharmaceutical Setting (PM12)

Submitted by Damir Simic and Mausumee Guha, Chairpersons of the PM12 Continuing Education (CE) Course

When target/compound safety issues arise during drug development, are you ready to respond effectively and rapidly? What are the critical questions that need to be answered? What are the tools and strategies an investigative toxicologist can use to answer these questions in a time critical but comprehensive manner for teams to understand and mitigate preclinical and clinical risk?

Dealing with impending safety concerns is further complicated by the scientific capability, communication team, and organizational priorities as well as the regulatory environment. Through real life examples, this CE course will outline investigative toxicology strategies used in pharmaceutical development from early discovery to life-cycle management. It will focus on three key areas: designing testable hypotheses; data communication; and decision-making that impact project outcomes.

The five *Best Practices* lectures will highlight strategies unique to each of the development steps. The attendees will learn about the regulatory perspective of value-added investigative efforts, as well as the implementation of novel tools such as MindMaps, and the prioritization matrix as part of the target safety profile assessment.

We invite you to register for the PM12 CE course today! Access a full listing of the CE courses at the 2015 SOT Annual Meeting website.

SOT's Career Development Program Track

To help you develop your near-term and long-term career pathway, plan on attending the Education-Career Development Sessions scheduled this year.

The sessions will be held in the San Diego Convention Center and include the following:

- Adaptive Leadership: Anticipating, Initiating, and Responding to Change—**Monday, March 23, 12:10 pm–1:30 pm, Room 7**
- Challenges in the Life Cycle of a Toxicologist—**Monday, March 23, 2:00 pm–4:45 pm, Room 7**
- What Toxicologist Do You Wanna Be? The Role of Toxicologists across Diverse Organizations—**Wednesday, March 25, 12:00 Noon–1:20 pm, Room 7**
- Crafting High-Impact Manuscripts: The Process from Hypothesis through Review and Publications —**Wednesday, March 25, 4:30 pm–5:50 pm, Room 7**

In Vitro Toxicology Lecture and Luncheon: Approaches for Predicting Health Impacts of Nanomaterials

By Richard S. Pollenz, Education Committee Chair

James C. Bonner, North Carolina State University, Raleigh, North Carolina, has been selected by the Education Committee to be the speaker for the *In Vitro* Lecture and Luncheon at 12:00 noon, Monday, March 23. This event is sponsored by an educational grant from the Colgate-Palmolive Company. The goal of the *In Vitro* Toxicology Lecture series is to feature important research using *in vitro* and alternative techniques to study basic mechanisms and to illustrate how these test methods benefit animal welfare by refining, reducing, and replacing animal use whenever it

is feasible.

Undergraduate students, graduate students, postdoctoral scholars, and recipients of Colgate-Palmolive awards are among the guests at the *In Vitro* Toxicology Lecture and Luncheon. Students and postdoctoral scholars register for $10 (nonrefundable) via the Annual Meeting registration. Dr. Bonner will present an introduction to the topic, challenge participants to discuss specific questions at their tables, and attendees will report their ideas to the general audience.

The development of *in vitro* alternative approaches to test chemical toxicity and reduce the need for *in vivo* rodent testing continues to be a key area of focus for toxicologists and the public in general. While traditional toxicology methods have relied heavily on animals, new high-throughput screening approaches to generate toxicological data are becoming increasingly available for the safety assessment of chemicals. The emergence of the nanotechnology revolution has made the demand for alternative testing more urgent than ever to address a rapidly expanding number and variety of engineered nanomaterials. Nanotechnology is anticipated to bring societal benefits in the areas of medicine, engineering, electronics, and energy. However, it also is inevitable that some nanomaterials will present risks for disease in humans exposed occupationally or as a result of exposure to consumer products that incorporate nanomaterials.

As the number of different types and modifications of nanomaterials in research, development, and commercialization continues to grow exponentially, a reliable and robust scientific approach to screen nanomaterial toxicity will require *in vitro* cell systems that can predict disease in mice and humans *in vivo*. A promising new toxicological paradigm for nanomaterials will be discussed, using carbon nanotubes as a case study, which utilizes alternative test strategies to reduce reliance on animal testing through the use of *in vitr*o cell-based model systems. The most appropriate types of *in vitro* systems for predicting specific types of disease (e.g., cancer, fibrosis, asthma) will be addressed for hazard assessment of nanomaterials at various stages of synthesis, product development, and overall life cycle.

We’re Headin’ for a ShowDown…

Submitted by Meghan Cromie, Graduate Student Leadership Committee Secretary

After a hard day's work, do you enjoy coming home to that other silver fox on *Jeopardy* who goes by the name of Trebek? Or do you prefer to hit the town for a good ol’ fashioned night of bar trivia? If so, we have got an exciting event that all toxicologists would thoroughly enjoy.

You are invited to partake in the 2015 Tox ShowDown on Tuesday, March 24 , 7:30 pm–9:00 pm, at the Marriott Marquis San Diego Marina Hotel. Three teams will test their toxicology skills and knowledge of random toxicology factoids to duke it out for the awesome grand prize.

Our emcee Phil Wexler will provide enough laughs to compete with any sneezing puppy or kitten on YouTube. Spaces are still available for contestants, so feel free to contact the Graduate Student Leadership Committee President Alessandro Venosa or the Secretary Meghan Cromie to sign up and possibly earn bragging rights over your colleagues for the 2015 fiscal year.

Even if you don’t want to play as a contestant, you are encouraged to attend and enjoy this truly unique SOT Annual Meeting experience. So get ready to unwind after a long day at the meeting, grab a drink at the cash bar, possibly win a door prize for simply attending, or even win the grand prize as a contestant. Trust us, this could be the most fun you will have in San Diego, so don’t forget to include the Tox ShowDown in your 2015 Annual Meeting itinerary!

Graduate Student Leadership Committee Chair: "I Ain't Afraid of No Showdown"

Submitted by Alessandro Venosa, Chair, Graduate Student Leadership Committee

Every year in the two to three weeks preceding the SOT Annual Meeting, I sit down and begin planning my talks, symposia, workshops, CE courses, and poster sessions, as well as the evening receptions organized by the Specialty Sections. In my first year while attending one of these receptions in San Francisco in 2012, a faculty member from my school grabbed me and said, "I am the judge for the Tox ShowDown, come with me!" I replied, "Tox WhatDown?" No answer; just a seat on a riser in a room filled with about forty people, my name on a tent card next to eight other scientists, including now 2014–2015 SOT Vice President Peter L. Goering. A couple of minutes into the game, I realized that there was no need to be alarmed. Both audience and participants were having a blast, and I actually knew some of the answers to the questions asked, whether toxicology related or seemingly random. I had so much fun that the following year, I volunteered to help with the organization of the event in San Antonio.

The Tox ShowDown is an event where you can find a stress-free environment composed of trainees and PIs in the same room, trying to figure out which one is Iceland's signature distilled beverage between brennivin, akvavits, lapponia, or naerfot—I still don't know. Now, three years later, we are working on organizing the newest edition of the Tox ShowDown, and we are looking to recruit scientists as contestants to complete the three teams. Academia? Industry? Government? Bring it on!

Are you interested or know someone who knows "everything" about toxicology? Do you think your PI is the perfect fit for this kind of challenge? Please ask him/her to participate!!! Contact me via ToXchange at Alessanddro Venosa or GSLC Secretary Meghan Cromie and we'll test your toxicology skills as well as your ability to laugh at one of the funniest and most entertaining SOT events. Phil Wexler will once again serve as emcee and master of ceremonies, and Sue Ford will return as timekeeper. Harry Salem will serve as our distinguished judge.

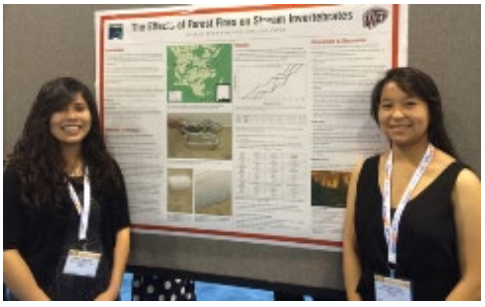
The 2015 Tox ShowDown will take place on Tuesday, March 24, at 7:30 pm at the Marriott Marquis San Diego Marina Hotel. So this year, be sure to add the Tox ShowDown to your calendar of evening events! There also is a phenomenal door prize possibly waiting for you!

Visit the SOT website for more information about the Tox ShowDown, and be sure to visit the photo gallery for fun images of the Tox ShowDowns from 2013 (San Antonio) and 2014 (Phoenix).

SOT Engages in High School Outreach in San Diego

The K–12 Subcommittee under the leadership of Angela Slitt invites toxicologists to participate in activities designed to increase knowledge about toxicology and encourage pursuit of careers in toxicology. This Subcommittee is under the auspices of the Society of Toxicology (SOT) Education Committee. We thank the many SOT members who are engaged in outreach and help with these events. You can volunteer to assist with these activities.

High School Poster Exposition
Tuesday, March 24, 10:30 AM–12:30 PM
ToxExpo Exhibit Hall, San Diego Convention Center



High School students from the San Diego area and from around the country will present toxicology-related research posters in a special area of ToxExpo near the SOT Pavilion. Sponsored by the Education Committee and K–12 Subcommittee, Marie Bourgeois is the coordinator of this activity. Please stop by to visit with these developing scientists and encourage them to pursue careers in toxicology.

We especially thank the Southern California Regional Chapter of SOT and coordinator Virunya Bhat for organizing two

Regional Chapter activities in conjunction with the SOT 2015 Annual Meeting.

San Diego Festival of Science and Engineering EXPO Day
Saturday, March 21, 10:00 AM–5:00 PM
Petco Park, Downtown San Diego

The Southern California Regional Chapter will host a booth at the free and largest annual Southern California festival of science, technology, engineering, and math (STEM) education. What's all the buzz about caffeine? Stop by "ToxTown" to test your caffeine trivia knowledge about beverages, food, and consumer products with added caffeine. Come play Tic-Tac-Tox and watch a specially coordinated new "Risk Bites" YouTube episode. Chat with Andrew Maynard, creator of "Risk Bites" and recipient of the 2015 SOT Public Communications Award. Engage with toxicologists in other hands-on activities designed to foster an appreciation of the science and the profession of toxicology. Bring your family to participate or volunteer to help build for the future of toxicology!

Greater San Diego Regional Science Fair Judging
Wednesday, March 25, 11:00 AM–2:30 PM
Balboa Park, Downtown San Diego

Meet at the Convention Center to travel to the nearby Greater San Diego Science and Engineering Fair to assist the Southern California Regional Chapter in their annual tradition of selecting awards for students with outstanding projects related to toxicology.

Invitation to Academic Program Directors for Undergraduate Program Session

Academic Toxicology Program Director and Internship Host Session
2015 Undergraduate Education Program
Invitation to Participate

Program Directors,

The Society of Toxicology (SOT) Committee on Diversity Initiatives (CDI) invites a representative of your toxicology, pharm/tox, or environmental health graduate training or research internship program to participate in the **Academic Toxicology Program Director and Internship Host Session** as part of the 2015 Undergraduate Program at the SOT 2015 Annual Meeting in San Diego. The goal of the SOT Undergraduate Education Program is to encourage students to pursue graduate school and careers in the biomedical sciences, especially toxicology.

Your representative will have the opportunity to meet with about 50 undergraduates from around the country and faculty advisors on Sunday, March 22, 2015 from 3:00 pm–5:00 pm.

Invitations have been sent. If your department has not received a message, please contact to Rachel Woodson to RSVP by **Friday, March 13, 2015**.

Invitation to Participate in SOT "Chat with an Expert" in San Diego

The Graduate Student Leadership Committee (GSLC) invites members to participate in this year's "Chat with an Expert" (CWAE) program in San Diego!

If you are an expert, postdoc, or student who wish to sign up for "Chat with an Expert," and you missed the registration period (December 15 to January 31 for expert toxicologists and postdocs who want to host a session with a graduate

student; February 1 through February 28 for students and postdocs who wish to meet with an expert toxicologist), you may still sign up at the "Chat with an Expert" poster, which will be located in the @SOT area of the Convention Center (registration level).

Experts may provide information for the informal meeting/chat that is convenient for their schedule on the poster. Graduate students and postdocs will then be able to select experts based on their time availability.

The meeting can be a chat over coffee or snack, or simply an informal meeting in a relatively quiet area of the Convention Center.

For more information on "Chat with an Expert," please visit the SOT website.

SOT Announces 2015 Best Paper in *Toxicological Sciences* Award and Postdoc Best Paper Awards

Scientists from the US Environmental Protection Agency, Hamner Institutes for Health Sciences, and Bruce Allen Consulting are being honored for publishing the best paper in *Toxicological Sciences*. The **2015 SOT Board of Publications Award for the Best Paper in *Toxicological Sciences*** is being bestowed by the Society of Toxicology (SOT) on a paper published in the July 2013 issue (Volume 134, No. 1) of the journal, titled "Temporal Concordance Between Apical and Transcriptional Points of Departure for Chemical Risk Assessment." (Thomas RS, Wesselkamper SC, Wang NCY, Zhao QJ, Petersen DD, Lambert JC, Cote I, Yang L, Healy E, Black MB, Clewell HJ, Allen BC, Andersen ME. *Toxicol Sci*. 2013 Jul; 134(1): 180–194. doi:10.1093/toxsci/kft094)

"Every month, our peer-reviewed journal *Toxicological Sciences* publishes some of the most notable work in the field of toxicology, so to be selected as the best of the best is a true honor that we are proud to bestow upon Dr. Russell S. Thomas and his colleagues," says Norbert E. Kaminski, SOT President 2014–2015. "Their paper advances our discipline, as it begins to addresses the complex issues surrounding the use of quantitative data in chemical risk assessment."

The authors of the honored paper are **Russell S. Thomas, Scott C. Wesselkamper, Nina Ching Y. Wang, Q. Jay Zhao, Dan D. Petersen, Jason C. Lambert, Ila Cote, Longlong Yang, Eric Healy, Michael B. Black, Harvey J. Clewell III, Bruce C. Allen,** and **Melvin E. Andersen**.

Each year, the SOT Postdoctoral Assembly recognizes three early career members who are authors of papers featuring research accomplished during a mentored postdoctoral experience. The recipients of the **2015 Best Postdoctoral Publication Awards** are as follows:

- **John Clarke, PhD,** University of Arizona, for a paper in the Journal of Hepatology titled "Synergistic Interaction Between Genetics and Disease on Pravastatin Disposition." (Clarke JD, Hardwick RN, Lake AD, Lickleig AJ, Goedken MJ, Klaassen CD, Cherrington NJ. Journal of Hepatology. 2014 Jul; 61(1): 139–47. dx.doi.org/10.1016/j.jhep.2014.02.021)
- **Yong Ho Kim, PhD,** US Environmental Protection Agency, for a paper in Particle and Fibre Toxicology titled "Cardiopulmonary Toxicity of Peat Wildfire Particulate Matter and the Predictive Utility of Precision Cut Lung Slices." (Kim YH, Tong H, Daniels M, Boykin E, Krantz QT, McGee J, Hays M, Kovalcik K, Dye JA, Gilmour MI. Part Fibre Toxicol. 2014 June; 11: 29. doi:10.1186/1743-8977-11-29)
- **Christina Powers, PhD,** US Environmental Protection Agency, for a paper in *Toxicological Sciences* titled "Sparking Connections: Toward Better Linkages Between Research and Human Health Policy—An Example

with Multiwalled Carbon Nanotubes." (Powers CM, Gift J, Lehmann GM. *Toxicol Sci.* 2014 Sept; 141(1): 6–17. doi: 10.1093/toxsci/kfu117)

The field of toxicology and toxicologists are responsible for aiding human, animal, and environmental health and safety through the study of the adverse effects of chemicals and other biological agents.

All 2015 SOT Award recipients will be honored at the Society's 54th Annual Meeting & ToxExpo in San Diego, California, from March 22–26, 2015.

Previously announced 2015 SOT Awards recipients are:

- 2015 SOT Achievement Award: **Vishal S. Vaidya, PhD,** Harvard Medical School.
- 2015 SOT Arnold J. Lehman Award: **Richard A. Becker, PhD, DABT,** American Chemistry Council.
- 2015 SOT Distinguished Toxicology Scholar Award: **Ian Kimber, OBE, PhD, FSB, FBTS, ATS,** University of Manchester, United Kingdom.
- 2015 SOT Education Award: **Theodore Slotkin, PhD,** Duke University Medical Center.
- 2015 SOT Enhancement of Animal Welfare Award: **Marcel Leist, PhD,** University of Konstanz, Germany.
- 2015 SOT Merit Award: **Günter Oberdörster, DVM, PhD,** University of Rochester Medical Center.
- 2015 SOT Public Communications Award: **Andrew D. Maynard, PhD,** University of Michigan Department of Environmental Health Sciences.
- 2015 SOT Translational Impact Award: **Jeff Burgess, MD,** University of Arizona.
- 2015 SOT Undergraduate Educator Award: **Mindy F. Reynolds, PhD,** Washington College.
- 2015 SOT Colgate-Palmolive Grant for Alternative Research: **Alfredo Miranda de Goes, PhD,** Universidade Federal de Minas Gerais, and **Lei Li Kerr,** Miami University.
- 2015 SOT Colgate-Palmolive Postdoctoral Fellowship Award in *In Vitro* Toxicology: **Fabian A. Grimm, PhD,** Texas A&M University.
- 2015 SOT Colgate-Palmolive Award for Student Research Training in Alternative Methods: **Prajakta Shimpi, MS,** University of Rhode Island.
- 2015 SOT Syngenta Fellowship Award in Human Health Applications of New Technologies: **Alok Ranjan, BS,** Texas Tech University Health Sciences Center.

2015 Best Postdoctoral Publication Award Recipients

The Postdoctoral Assembly Executive Board is pleased to announce the recipients of the 2015 Best Postdoctoral Publication Award (BPPA)! The BPPA recognizes talented postdoctoral researchers who recently have published papers in the field of toxicology as a result of their work conducted during the postdoctoral research experience. The awards will be presented at the Postdoctoral Assembly Luncheon during the Society of Toxicology 2015 Annual Meeting, March 22–26. 2015. Each awardee will receive $250 and a plaque recognizing their achievement.

Congratulations to the awardees.

John Clarke, University of Arizona

Synergistic Interaction Between Genetics and Disease on Pravastatin Disposition

Clarke JD, Hardwick RN, Lake AD, Lickleig AJ, Goedken MJ, Klaassen, CD, Cherrington. NJ. *Journal of Hepatology*, 2014 Jul; 61(1):139–47.

Dr. Clarke's paper highlights the importance of considering multiple factors in interindividual variability in drug pharmacokinetics and the occurrence of adverse drug reactions. These affect millions of people and cost billions annually. As his advisor Nathan Cherrington reported, "For most drugs a 'one dose fits all' strategy is still typically employed, yet this approach is increasingly naïve as evidence mounts that genetics, disease, and other factors profoundly impact drug metabolism individually, and in some cases synergistically…

We had long discussions about how to test whether genetics or disease plays a larger role in interindividual variability in drug toxicities. John was the one to come up with most of the specifics…The result was a fair fight with an unexpected outcome with significant implications in personalized medicine."

Yong Ho Kim, US Environmental Protection Agency

Cardiopulmonary toxicity of peat wildfire particulate matter and the predictive utility of precision cut lung slices

Published in *Particle and Fibre Toxicology* in June 2014

Scale and frequency of wildfires in the United States is increasing. Peat fires in North Carolina propagate slowly without flame but emit huge amounts of smoke and little is known about the potential adverse health impacts of peat wildfire exposure. Dr. Kim's mentor M. Ian Gilmour says, "The most significant finding in this work was that smoke from a peat wildfire in North Carolina causes not only respiratory illnesses but cardiac dysfunction, and these symptoms appear to be associated with fuel type and combustion phase of the wildfire. This important finding was consistent with previously published epidemiological studies that showed increased emergency department visits for respiratory diseases and heart failure during the wildfire event and could provide information on how to reduce public health risk from wildfire exposure." In addition, the study found that lung tissue slices provide areliable alternate for animal lung toxicity testing and can be employed for hazard identification and risk assessment.

Christina Powers, US Environmental Protection Agency

Sparking Connections: Toward Better Linkages Between Research and Human Health Policy—An Example with Multiwalled Carbon Nanotubes

Powers CM, Gift J, Lehmann GM

Toxicol Sci. 141(1): 6–17, September 2014

The article provides an in-depth discussion of a series of priority research gaps for the emerging environmental contaminant multiwalled carbon nanotubes and fills a critical gap in the communication between researchers and those who use data, including risk assessors and risk managers. Dr. Powers organized a team of individuals to design and implement the workshop process to produce the data that are presented and discussed in this publication. She led the data analysis effort including evaluation of how the research priorities align with steps in the risk assessment process. Dr. Power's advisor Lyle Burgoon says "This paper demonstrated something that few postdocs have the opportunity to do—go way outside their comfort zone…This is truly transdisciplinary thinking. It's extremely rare for a postdoc who is traditionally trained in toxicology to reach across disciplines to social science in this way." Not only will this report present research priorities but experimental design and reporting consideration that can improve the utility of the resulting data for risk assessors.

PDA Poster Tours for Trainees: Trainee Sign Up Now Open

There are many Student and Postdoctoral Scholar events held in conjunction with the Society of Toxicology (SOT) 2015 Annual Meeting. Among these activities are the Postdoctoral Assembly (PDA) Poster Tours for Trainees.

Graduate Students and Postdocs, Sign up for a guided Poster Tour with an expert toxicologist. Participants will join a guide to take part in critical evaluation of cutting-edge toxicology methods and research findings. Additionally, trainees will have a unique opportunity to network with your guide and their colleagues.

Select a time Monday through Wednesday, March 23–25, to participate in the one-hour tour on the topics of your

interest.

Sign up is open from now until March 6 for postdoctoral scientists and graduate students!

You will be contacted by a member of the PDA once your group assignment has been made. Poster tour groups will meet at their designated start time at the Poster Tour Board near the @SOT Center on the lower level of the San Diego Convention Center.

We look forward to seeing you in San Diego!

Kathryn E. Page
Vice-Chair, PDA

2015 Graduate Student Award Recipients Named by the SOT Awards Committee

Colgate-Palmolive Awards for Student Research Training in Alternative Methods amd Fellowship Award in *In Vitro* Toxicology

"The Society is committed to discovering the best methods for evaluating the safety of diverse biological agents, which includes finding alternative methods to traditional animal testing," SOT 2014–2015 President Norbert E. Kaminski stated. "With the generous support of Colgate-Palmolive, SOT is able to foster research into alternative testing methods through a number of grants and awards each year, and this year's award recipients have proposed projects that will hopefully further the efficiency and effectiveness of these tests."

Colgate-Palmolive has been supporting SOT Awards dedicated to the development of alternative testing methods that reduce, replace, or refine the use of animals in toxicological research since 1988.

Recipients of 2015 SOT Colgate-Palmolive-supported Awards are as follows:

• Fabian A. Grimm, PhD, Texas A&M University, who is being honored with the 2015 SOT Colgate-Palmolive Postdoctoral Fellowship Award in *In Vitro* Toxicology. This award of up to $44,000 is designed to help postdoctoral trainees advance the development of alternatives to animal testing in toxicological research. Dr. Grimm is pictured at the left.

• Prajakta Shimpi, MS, University of Rhode Island, who is being awarded a 2015 SOT Colgate-Palmolive Award for Student Research Training in Alternative Methods. This award provides students with the opportunity to receive training using *in vitro* methods or alternative techniques to reduce, replace, or refine the use of animals in toxicological research. Ms Shimpi is pictured at the right.

Syngenta Fellowship Award in Human Health Applications of New Technologies

The SOT Awards Committee has named Alok Ranhan, Texas Tech University Health Sciences Center, as the 2015 SOT Syngenta Fellowship Award Recipient in Human Health Applications of New Technologies. This award provides mode-of-action research funding to a third-year (or later) graduate student or postdoctoral trainee. The funding is intended to support mode-of-action research aimed at characterizing dose-dependent effects of xenobiotics on mammalian systems in such a way that the causal sequence of key events underlying toxicity is elucidated.

The work should permit a quantitative basis for extrapolation of the results from animal

bioassays or animal models (*in silico*, *in vitro*) to humans at relevant human doses. The award consists of $15,000 in fellowship funds as well as travel to the SOT Annual Meeting to accept the award and travel to a Syngenta site to present the results.

SOT Graduate Student Travel Support

This year 70 graduate students will receive Graduate Student Travel Support to attend the Society of Toxicology 54th Annual Meeting in San Diego, California. SOT Graduate Travel Support is provided, in part, with generous contributions from Battelle Foundation, Burroughs Wellcome Fund, and the SOT Endowment Fund. The complete list of graduate students receiving these awards will be available in the Historical Awards Listing on the SOT website following the Annual Meeting.

Access more information on these and other SOT Awards on the Awards and Fellowships section of the SOT website by selecting the award criteria for the awards in which you are interested (i.e., Endowment Fund Awards, For Graduate Students, For Postdoctoral Scholars, For Scientists, For Undergraduate Students, and their Advisors, etc.). You may also select a specific award from the complete award listing from the drop-down menu on the SOT Awards and Fellowships page. Please note while most SOT Awards have an annual application deadline of October 9, many awards, especially those offered by SOT Regional Chapters, Special Interest Groups, and Specialty Sections, have deadlines throughout the calendar year.

Shawn Douglas Lamb Is Named Society of Toxicology Honorary Member

Submitted by SOT 2014–2015 Past President Lois D. Lehman-McKeeman

Shawn Douglas Lamb has served as Executive Director for the Society of Toxicology (SOT) since 1993, retiring December 31, 2014. Under her vigilant eye, the Society has grown from an international membership of 3,000 to a vigorous society of more than 7,800 members. As Executive Director, she has worked with 21 different SOT Presidents and Councils, contributed broadly to the Society's strategic planning, governance, growth, and outreach, and she has made personal contributions—too many to count—to the success of the Society.

In fact, as Council members rotate on and off and the Presidential Chain is new each year, Ms. Lamb has been the single constant factor in the Society's leadership over the past two decades. She has had a direct impact on every initiative undertaken or proposed by each SOT Council, Committee and Subcommittee, Task Force, or other ad hoc group. Her tireless dedication and steadfast support of these groups are paralleled only by her outstanding leadership. Ms. Lamb has demonstrated an uncanny ability to understand the complex challenges that face our Society. Her polished organizational skill has provided options towards solutions for any obstacles that have been encountered.

In addition to the role she has played within SOT, Ms. Lamb has been working with the global toxicological community for many years. She has an international reputation and stature in toxicology. She has worked as the Executive Director of IUTOX, the International Union of Toxicology. As the Founder of Association, Innovation, and Management, Inc. (AIM), an association management company focused on providing a complete and broad array of administrative

services to professional scientifically based client associations, she has shared our mission to improve human and environmental health.

Honorary membership in the SOT is designed to recognize nonmembers who "embody outstanding and sustained achievements in the field of toxicology." We often honor those individuals who have made noteworthy contributions through research and education in the science. Ms. Lamb has developed international recognition as a collaborative voice for toxicologists. As an administrative leader of the Society, she has been a stalwart supporter of the growth and vitality of our Society. As with our other distinguished honorees who achieved recognition through their research, she has been extremely influential for our science. Given the breadth of her contributions in support of toxicology, it is only fitting that the SOT bestows Honorary Membership to Shawn Douglas Lamb.

The presentation of this honor will occur at the 2015 SOT Awards Ceremony to be held on Sunday, March 22, 2015, at the San Diego Convention Center.

Günter Oberdörster Receives SOT 2015 Merit Award

Günter Oberdörster is the recipient of the Society of Toxicology (SOT) 2015 Merit Award. Dr. Oberdörster is a pioneer in the field of research on aerosol behavior in the respiratory tract. His research has encouraged many breakthroughs in our understanding of particle deposition, clearance, and effects in the respiratory tract. This research has focused on furthering our understanding of the influence of aerosol characteristics on the toxicity and underlying mechanisms of inhaled materials. His observations in intact mammals including human subjects have helped to advance our understanding of the role of particle dose-metrics with respect to mass, number, surface area, and chemical composition in the pathogenesis of respiratory tract diseases. Ground-breaking findings of Dr. Oberdörster and his colleagues are key to understanding the toxicity of nanomaterials and ensuring safety in many beneficial applications. Because of these accomplishments, he is widely known as the "Father of Nanotoxicology" in many circles.

Dr. Oberdörster's early research at the Fraunhofer Institute on inhaled cadmium, nickel, and zinc compounds changed the understanding of the inhalation hazards of these elements. In the late 1970's, Dr. Oberdörster visited the University of Rochester as a Visiting Faculty member which served only to nurture his interest in inhalation toxicology. In 1981, he was appointed Associate Professor there, promoted to Professor in 1989, and has continued making seminal contributions to the fields of aerosol sciences and respiratory toxicology through his research, teaching, and public service for four decades. During this time, he has authored or co-authored over 300 publications.

He received his Doctor of Veterinary Medicine degree in 1964 and a PhD in Pharmacology in 1966 from the University of Giessen in Germany. He has been an SOT member since 1983, with a brief interruption for ~1 year in 2000. During this time, he has been very active within the Society having presented papers regularly at the SOT Annual Meeting and has organized and chaired many scientific sessions. He also has been very active with the Inhalation and Respiratory Specialty Section, where he had served as President and was the recipient of the Career Achievement Award in 1996. Dr. Oberdörster became an active member of the Nanotoxicology Specialty Section at its formation in 2009 and received a Special Recognition Award in 2014.

Jefferey L. Burgess Awarded SOT 2015 Translational Impact Award

Over the past ten years, Jefferey L. Burgess has made significant contributions to translational research studying environmental arsenic exposure, the effects of combustion product exposure in fire fighters, and exposure to diesel and alternative fuel emissions in miners. He is the recipient of the Society of Toxicology (SOT) 2015 Translational Impact Award.

Dr. Burgess' translational research was pivotal in providing an important link in arsenic exposure

on the development of pulmonary diseases incorporating previous findings on animal and *in vitro* model systems and applying these into human studies. He has been able to validate specific arsenic-induced changes in lung and blood biomarker proteins associated with levels of arsenic exposures. More recently, Dr. Burgess has determined a significant source of arsenic exposure stems from ingested food sources. His work is helping to evaluate those levels of exposure and the subsequent biological response.

In addition, Dr. Burgess became interested in combustion product exposure in fire fighters early in his career. This interest, paired with his understanding of chemical-induced toxic effect, his interactions with basic researchers, and his application of basic science markers as biomarkers in a targeted population, allowed him to translate science into studies that are providing a deeper assessment of fire fighter's exposure and an approach to minimize the risk and health affects for this at-risk group. A major outcome of this work has been to increase fire fighter use of respiratory protection during overhaul, the final phase of fighting a fire when self-contained breathing apparatus was previously not worn and when chemical exposures were still elevated despite no visible smoke.

Similarly, Dr. Burgess has begun to address the health status of miners. He has used his basic science and clinical skills to examine the risk that miners have in their current working conditions. His focus has been on the use of diesel engines within the mines and the effects of emissions on miner's health. He now is examining the extent of exposure and associated health effects of diesel, biodiesel, and other alternative fuels in underground mining operations, which should help guide future efforts to reduce hazardous exposures in this setting.

Dr. Burgess currently serves as the Associate Dean of Research at the Mel and Enid Zuckerman College of Public Health at the University of Arizona.

The Society is pleased to present Dr. Burgess with the 2015 SOT Translational Impact Award.

Ian Kimber Awarded 2015 SOT Distinguished Toxicology Scholar Award

The Society of Toxicology (SOT) 2015 Distinguished Toxicology Scholar Award is presented to Ian Kimber. Dr. Kimber has made many seminal contributions to immunotoxicology, the reduction of animals in research, as well as human and environmental safety. He led the development of the Local Lymph Node Assay (LLNA). As a validated *in vivo* test for skin sensitization, the LLNA has largely replaced the more animal-intensive previous test methods. The LLNA has been accepted by the Organisation for Economic Co-operation and Development (OECD) for Testing of Chemicals and the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) Regulations as the first choice for *in vivo* testing.

Dr. Kimber has pioneered changes in the approach taken by the international scientific community to the management of chemical and protein allergenicity. This has been achieved through progress in a number of areas including: identification and characterization of cytokine signals that regulate epidermal Langerhans cell migration, the discovery that different classes of chemical allergens stimulate discrete adaptive immune responses, and development of a novel approach for characterization of the potential allergenicity of transgenic products in crop plants.

He has made many contributions to toxicology having authored over 500 peer-reviewed journal publications and more than 100 book chapters as well as delivering over 1,500 presentations at scientific meetings internationally. In the midst of this robust involvement in the scientific community, he still has managed to mentor over 40 PhD students. Dr. Kimber has worked in academia and industry and currently serves as Chair and Professor of Toxicology at the

University of Manchester and Associate Dean for Business Development in the Faculty of Life Sciences.

Dr. Kimber has been a member of SOT since 1990. During this time, he has served in the leadership of the Immunotoxicology and Dermal Toxicology Specialty Sections, as well as on three ad hoc SOT Subcommittees. Dr. Kimber has distinguished himself such that he has received many honors in toxicology. He was awarded an SOT Enhancement of Animal Welfare Award in 2003 and the Immunotoxicology Specialty Section Career Achievement Award in 2005. In 2010, he received the EUROTOX Bo Holmstedt Prize for contributions to chemical and drug safety. Dr. Kimber is a Past President of the British Toxicology Society (2012–2014) and a former Chairman of the Board of the UK National Centre for the Replacement, Refinement and Reduction of Animals in Research (NC3Rs) (2008–2013). He was honored in 2011 when he was awarded an OBE (Officer of the Order of the British Empire) for services to science in the Queen's Birthday Honours List.

The Society is pleased to present Dr. Kimber with the SOT 2015 Distinguished Toxicology Scholar Award.

Richard Becker Is Awarded 2015 SOT Arnold J. Lehman Award

Richard Becker is the recipient of the 2015 SOT Arnold J. Lehman Award. Dr. Becker has significantly contributed to the field of toxicology for over 30 years. During this time, he has been a major driving force for development and application of new technologies and approaches for improving the practice of human health risk assessment. He has consistently been one of the forerunners in support of efforts to move human risk assessment forward scientifically through innovative thinking and principled risk assessment practice.

In particular, his work with colleagues on development of methods for interpretation of chemical biomonitoring data, on hypothesis-driven weight of evidence frameworks for evaluating data for endocrine disruptors, on extending the work of the National Academy of Science from its Science and Decisions report, "Silver Book," and on enhanced tiered toxicity testing frameworks with triggers for assessing hazards and risks of commodity chemicals, are all important contributions to the debate of scientifically based safety assessment in the US and abroad.

Moreover, Dr. Becker has engaged and educated the scientific community through collaborative symposia that evaluate and review scientific evidence and strategies that enhance communication of chemical assessment information. All of these efforts have led to major progress in the use of new methodologies in health assessments conducted by industry, US federal agencies, and agencies around the world.

He received his PhD in Pharmacology and Toxicology from the University of California, Irvine. After postdoctoral training at the University of Toronto and the International Agency for Research on Cancer (IARC), he spent close to a dozen years as a scientist with the state of California. In 1999, he joined the American Chemistry Council (ACC), and in 2014, was appointed to lead ACC's Science and Research Division. He now manages ACC's Long-Range Research Initiative, a program focused on catalyzing innovations in toxicity testing and exposure science in the 21st Century.

Dr. Becker has been a member of the Society of Toxicology since 1990. During this time he has served on the Regulatory Affairs and Legislative Assistance Committee as well as the Congressional Science Fellowship Review Subcommittee.

The Society is pleased to present Dr. Becker with the SOT 2015 Arnold J. Lehman Award.

Andrew Maynard Awarded SOT 2015 Public Communications Award

The Society of Toxicology (SOT) 2015 Public Communications Award recipient Andrew

Maynard utilizes social media outlets in a novel way to communicate public health topics to broad audiences. He has been featured in nearly all media formats including television, print, web, and radio, and writes regularly for his personal blog, *2020 Science*. Dr. Maynard is most recognized for his established social media presence on a YouTube channel called "Risk Bites." His work on "Risk Bites" is rooted in the sciences of toxicology, exposure assessment, epidemiology, and risk. With simple graphics and concise language, Dr. Maynard provides insight into risk and safety topics that are presented in an easily understandable way. "Risk Bites" has been featured in mainstream publications ranging from *USA Today* to the technology website Gizmodo. More recently, Dr. Maynard was recognized as one of "The Top 50 Science Stars on Twitter," by *Science* magazine.

In the classroom, Dr. Maynard consistently challenges students to reach wider audiences of scientists and the general public alike by using innovative communications formats. His course "Communicating Science through Social Media" provided a unique approach to learning how to use social media as a tool to raise and help explain complex public health issues to those with or without advanced technical backgrounds.

In the scientific community, Dr. Maynard contributes significantly to peer-reviewed literature, serves on many journal editorial boards, actively participates in national and local conferences and workshops, and is a regularly invited lecturer. He is a recognized leader in the field of nanotechnology and has been published widely on topics such as exposure, risk, regulation, toxicological impacts, and the challenges associated with the evaluation of nanomaterials.

Dr. Maynard currently serves as the Director of the University of Michigan Risk Science Center. Based on his dedication to broadening public awareness of toxicological issues, the Society is pleased to present Dr. Maynard with the 2015 SOT Public Communications Award.

Vishal Vaidya Receives SOT 2015 Achievement Award

Vishal Vaidya is the recipient of the Society of Toxicology (SOT) 2015 Achievement Award. He has contributed to advancing regulatory science by modernizing toxicology and has set a high standard for future drug development and patient care. Dr. Vaidya has developed, evaluated, and validated highly novel tools for biomarker detection, comparing biomarkers (Kidney Injury Molecule-1 [Kim-1], Fibrinogen, extracellular microRNAs) using preclinical and clinical models of kidney injury in many collaborative studies. His work, supported by a National Institutes of Health/National Institute of Environmental Health Sciences (NIH/NIEHS) Pathway to Independence grant, in collaboration with the Predictive Safety Testing Consortium, led to the first kidney toxicity biomarker (Kidney Injury Molecule-1) qualified by the US Food and Drug Administration (US FDA) and the European Medicines Agency in 2008. These studies are likely to have a very significant impact on the way scientists monitor kidney injury in drug development and also in the clinics. In 2011, Dr. Vaidya won the NIH/NIEHS Outstanding New Environmental Scientist (ONES) award and in 2013 he was selected as one of six North American scientists to receive the Innovation in Regulatory Science Award from the Burroughs-Wellcome Fund.

Dr. Vaidya received his PhD in Toxicology from the University of Louisiana in 2003 and completed his postdoctoral fellowship in nephrology from Brigham and Women's Hospital in 2007. As an Assistant professor at Harvard, he has faculty appointments at the Brigham and Women's Hospital where he directs the Laboratory of Kidney Toxicology and Regeneration; at the Harvard Medical School where he heads the Systems Toxicology program within the Harvard Program in Therapeutic Sciences; at the Harvard School of Public Health where he directs a 5-credit graduate level course on Principles of Toxicology-Molecular and Translational Toxicology every fall; and at the Harvard Clinical and Translational Science Center (Harvard Catalyst) where he directs the course "Understanding Biomarker Science: From

Molecules to Images" every spring.

He has been a member of SOT since 1999. In 2001 he received the Novartis Graduate Student Fellowship Award that was presented at the SOT Annual Meeting. Over the years, Dr. Vaidya has received the Comparative and Veterinary Specialty Section Award (2002), Risk Assessment Specialty Section Award (2005), American Scientist of Indian Origin Young Investigator Award (2012), and SOT's Leading Edge in Basic Science Award (2014). He also has been active within SOT Committees having served on the Career Resource and Development Committee, Continuing Education Committee, and as a councilor for the Northeast Regional Chapter of SOT.

The Society is pleased to present Dr. Vaidya with the 2015 SOT Achievement Award.

Marcel Leist Receives SOT 2015 Enhancement of Animal Welfare Award

Marcel Leist is the recipient of the Society of Toxicology (SOT) 2015 Enhancement of Animal Welfare Award. Dr. Leist has been involved in the improvement of animal welfare through active research and application of alternative methods to replace animal experiments for more than 25 years. During this time, Dr. Leist has contributed successfully to the establishment of multiple experimental *in vitro* models that provide data on toxicity of environmental chemicals and other compound classes and that allow drug efficacy testing without the use of animals.

Dr. Leist has played an important role in transatlantic efforts in the development of new animal-free testing strategies based on new methodologies and new concepts proposed by the National Academy of Sciences Committee on Toxicity Testing or the Tox21 Consortium. Dr. Leist pioneered the use of cell-based systems in combination with human histology data to validate drug targets and to drive drug discovery projects up to clinical testing.

The concept of using human cell-based disease models of neurodegenerative diseases that Dr. Leist put into place 15 years ago has only just become mainstream thought in major pharmaceutical companies. The generation of LUHMES cells, an easily accessible model for human neurons, is used widely in the field of Parkinson's disease. He developed the neurite outgrowth assay that is among the very few assays that can detect human neurotoxicants and clearly distinguish them from unspecified cytotoxicants. This will likely become part of a battery of tests that will substitute animal-based neurotoxicity and developmental neurotoxicity testing.

Moreover, he has promoted the scientific exchange of scientists from academia, industry, and regulatory authorities on animal replacement issues. He has worked in collaboration with over 200 scientists worldwide to issue guidance to the entire field of Toxicology for the last six years. A notable example is his roadmap for the transition to animal-free toxicity testing.

Dr. Leist received his PhD in 1993 from the University of Konstanz, Germany. Currently, he serves at this university as the Doerenkamp-Zbinden Chair for *in vitro* Toxicology and Biomedicine and is a Full Professor in the Department of Biology. He has been a member of SOT since 2010.

The Society is pleased to present Dr. Leist with the 2015 Enhancement of Animal Welfare Award.

Theodore A. Slotkin Receives SOT 2015 Education Award

Theodore A. Slotkin is the recipient of the Society of Toxicology (SOT) 2015 Education Award. He has made impressive and significant contributions to education through his use of conventional and unconventional teaching techniques, including open discussions of current literature, of lay media, and of students' own research projects. Through classroom

conversations, he ensures that students learn the requisite subject areas, but always within a framework of critical evaluation of hypotheses and experimental outcomes.

Dr. Slotkin has devoted significant effort and time to developing new courses and new curricula, including *Essentials of Pharmacology, Toxicology and Drug Design* and *Experimental Design and Biostatistics for Basic Biomedical Scientists*. His ability to teach mathematical concepts to biologists is the hallmark of his success. With a career that spans four decades, he has had a major impact having taught thousands of students, and personally trained 26 undergraduates, 31 PhD students, and 23 postdoctoral researchers and visiting scientific scholars in his laboratory—far beyond the requirements of his teaching duties. In many cases, these trainees have gone on to successful careers in industry, government, and academia due in no small part to Dr. Slotkin's influence.

He has played integral roles in curriculum development for the Pharmacology PhD Program, the Integrated Toxicology & Environmental Health PhD Program, and the Undergraduate Pharmacology Curriculum for biology and chemistry majors. These are in addition to the key role he has played in other training programs including those in Cell & Molecular Biology, Neurosciences, Pharmacological Sciences, and MD/PhD.

Dr. Slotkin received his PhD from the University of Rochester in 1970. Currently, he serves as Professor in the Departments of Pharmacology & Cancer Biology, Psychiatry and Behavioral Sciences, and Neurobiology, as well as the Integrated Toxicology Program at the Duke University Medical Center. He received an SOT Board of Publications Best Paper in *Toxicological Sciences* Award in 1996 and has been a member of SOT since 1997.

The Society is pleased to present Dr. Slotkin with the 2015 SOT Education Award.

Mindy F. Reynolds Awarded 2015 Undergraduate Educator Award

Mindy F. Reynolds is the recipient of the Society of Toxicology (SOT) 2015 Undergraduate Educator Award. Dr. Reynolds has demonstrated dedication and commitment to undergraduate education in toxicology. When she arrived at Washington College in 2008, there were no toxicology courses offered and no toxicological research was being conducted. Within her first year, she had strived to develop a course in the Principles of Toxicology and by spring of 2009, she had begun to teach this course to undergraduate students. This course has been offered every spring since then. Dr. Reynolds also makes it a priority to oversee the independent research of undergraduate students each summer in an intensive 11-week research program.

In addition, Dr. Reynolds has given numerous presentations to undergraduate educators on the integration of toxicology into an undergraduate curriculum. She is very active within metals toxicology research that includes cytotoxic and genotoxic effects of multiple heavy metal exposure in human cells, but has expanded her research to include whole animal ecotoxicology in both vertebrate and invertebrate models. She actively involves students in this research and has mentored over 18 students on their senior thesis projects, several of which have dealt directly with her research.

Dr. Reynolds has been a member of the SOT since 2004. Since that time she has been dedicated to working towards her longtime mission of advancing the science of toxicology to undergrads. She currently serves as Chair of the SOT Education Subcommittee on Undergraduate Education and has served as a member of this committee since its inception in 2009. In 2010, she led the Undergraduate Subcommittee Workgroup to develop an online resource for undergraduate instructors. Under her leadership, the subcommittee has developed multiple programs for faculty including a webinar

series.

She was a featured speaker at the 2011 SOT Education Summit to provide perspective on undergraduate teaching to help develop SOT strategic efforts. Such is her commitment to her undergraduates that many students in her laboratory present their research annually at the SOT Annual Meeting and receive awards such as the Pfizer/SOT Undergraduate Travel Award.

The Society is pleased to present Dr. Reynolds with the 2015 Undergraduate Educator Award.

SOT Recipients of 2015 Toxicology Education, Student, and Global Awards Announced

The Society of Toxicology (SOT) is honoring educators, scientists, and dozens of students from around the world today through the announcement of the 2015 SOT Awards that focus on education and diversity.

Recognizing the value of supporting training and mentoring of future leaders in toxicology, SOT annually honors top educators who are providing students and postdoctoral trainees with a solid foundation in the field. The 2015 honorees are:

- **Mindy F. Reynolds, PhD,** Washington College, who is receiving the **2015 SOT Undergraduate Educator Award.** Sponsored by the SOT Endowment Fund, this award recognizes an SOT member who has made outstanding contributions to the teaching of undergraduate students in toxicology and toxicology-related areas. Dr. Reynolds helped establish the toxicology curriculum at Washington College, encourages her undergraduates to participate in science conferences, and has been a leader in SOT education activities.

- **Theodore Slotkin, PhD**, Duke University Medical Center, who is being awarded the **2015 SOT Education Award**. This award honors an individual who teaches and trains toxicologists and who has made significant contributions to education in the field of toxicology. Dr. Slotkin has been teaching and mentoring future toxicologists at Duke University for more than 40 years, with many SOT members receiving tutelage under him.

“The Society believes strongly in supporting the development and growth of toxicology’s next generation of researchers, and serving on the frontline in this effort are the toxicologists who have dedicated themselves to not only the profession, but also to mentoring budding scientists in the possibilities of the field. Drs. Reynolds and Slotkin are excellent scientists, but potentially more importantly, they are inspirations to their students,” says Norbert E. Kaminski, SOT President 2014–2015.

Each year, SOT also provides support for toxicology students through a number of awards and programs.

- **2015 SOT Syngenta Fellowship Award in Human Health Applications of New Technologies**: This award provides mode-of-action research funding to a third-year (or later) graduate student or postdoctoral trainee. The 2015 recipient is **Alok Ranjan, BS**, Texas Tech University Health Sciences Center.

- **2015 Pfizer SOT Undergraduate Student Travel Award**: SOT and Pfizer recognize top undergraduates who are presenting research at the Society’s Annual Meeting & ToxExpo, which is being held March 22–26, 2015, in San Diego, California. This award provides travel support for the meeting and pairs the recipients with Pfizer-provided mentors during the Annual Meeting.

    2015 Recipients

    Alexander Jones (Purdue University)
    Anna Wojcicki (University of Minnesota)
    Emily Daniel (William Jewell College)
    Kathryn Fulda (Washington College)

Latisha Pryor (Fort Valley State College)
Megan M. Koenecke (Kenyon College)
Nicole Sidebotham (Oregon State University)
Royce Nichols (King University)
Samantha Hall (Duke University)
Scott Freeburg (Kenyon College)
Sloane K. Miller (University of North Carolina-Chapel Hill)
Weelic Chong (Oberlin College)
Yssa Rodriguez (St. Mary's University)
Zuania I. Cordero Badillo (University of Puerto Rico-Rio Piedras)

- **2015 SOT Graduate Student Travel Support**: This award provides graduate students with funding support to attend and present research at the Society's Annual Meeting & ToxExpo.

2015 Recipients

Alessandro Venosa (Rutgers University)
Alexandra Turley (Michigan State University)
Allison Isola (Rutgers University)
Alok Ranjan (Texas Tech University Health Sciences Center)
Amy Mihalchik (West Virginia University)
Andrée-Anne Hudon Thibeault (INRS University, Canada)
Anika Dzierlenga (University of Arizona)
Antonio Ward (Mississippi State University)
Charisse Holmes (North Carolina State University)
Dana Lauterstein (New York University)
Dana Walsh (University of North Carolina)
Deirdre Tucker (University of North Carolina)
Durr-e-shahwar Malik (Imperial College London, United Kingdom)
Dushani Palliyaguru (University of Pittsburgh)
Dwayne Carter (University of Texas Medical Branch)
Elissa Wong (University of Rochester Medical Center)
Elizabeth Stanford (Boston University)
Élyse Caron-Beaudoin (INRS University, Canada)
Emma Bowers (University of North Carolina-Chapel Hill)
Eric Ward (Purdue University)
Evan Frank (University of Cincinnati)
Georgina Harris (Center for Alternatives to Animal Testing)
Gopi Gadupudi (The University of Iowa)
Gregory Smith (University of Connecticut)
Hassan Althurwi (University of Alberta, Canada)
Jayson Chen (Rutgers University)
Jinyoung Lee (Purdue University)
Josephin Nerling Rashida Gnanaprakasam (Cinvestav, Mexico)
Julieta Martino (University of Southern Maine)
Kathy Xue (University of Georgia)
Kaushal Joshi (St John's University)
Kerry Belton (Penn State University)
Kpobari Nkpaa (University of Port Harcourt, Nigeria)

Leah Wehmas (Oregon State University)
Maria Alvarado (Cinvestav, Mexico)
Marianna Stamou (University of California-Davis)
Mary Francis (Rutgers University)
Michael Osborne (Imperial College London, United Kingdom)
Minsu Kang (University of Georgia)
Mónica Jiménez-Córdova (Cinvestav, Mexico)
Monique Williams (University of California-Riverside)
Natalie Scholpa (University of Georgia)
Nathaniel Girer (Penn State University)
Nikita Joshi (Michigan State University)
Osama Elshenawy (University of Alberta, Canada)
Pankajini Mallick (University of Houston)
Patrick Hannon (University of Illinois Urbana-Champaign)
Phillip Wages (University of North Carolina-Chapel Hill)
Prathap Kumar Mahalingaiah (Texas Tech University)
Rachel Behar (University of California-Riverside)
Ravikumar Sitapara (St John's University)
Roseline Omiwole (University of Ibadan, Nigeria)
Ross Osgood (University of Colorado Anschutz Medical Campus)
Ruoyun Ma (Purdue University)
Sabbir Khan (National Institute of Pharmaceutical Education and Research, India)
Sage Begolly (University of Rochester)
Sanjay Dholakiya (St. John's University)
Sara Wirbisky (Purdue University)
Saurabh Vispute (St John's University)
Stefanie O'Neal (Purdue University)
Suvarthi Das (University of South Carolina)
Tara Raftery (University of South Carolina)
Vicente Escamilla-Rivera (Cinvestav, Mexico)
Vijaykumar Kale (Penn State University)
Vivek Lawana (Iowa State University)
Wen Xin Koh (The University of Iowa)
William Klaren (The University of Iowa)
Xiao Zheng (University of Florida)
Xing Xin (University of Iowa)
Zeynep Agim (Purdue University)

- **2015 SOT Committee on Diversity Undergraduate Travel Awards**: SOT provides promising undergraduate students from diverse backgrounds an introduction to toxicology and encourages their pursuit of graduate studies in the field by supporting travel and participation in the SOT Undergraduate Education Program at the Society's Annual Meeting & ToxExpo. Through this award, SOT also provides travel funding for faculty advisors to attend the Annual Meeting.

2015 Undergraduate Recipients

Adriana A. Torres (St. Mary's University)
Alejandro I. Ramirez (Rio Hondo College)
Anna V. Wojcicki (Paine College)
Avis Francis (University of Massachusetts)
Ayeshia Morris (Rider University)
Brittany Nixon (North Carolina Central University)
Brittany S. Lynch (North Carolina Central University)
Charlene N. Rivera (University of Puerto Rico-Cayey)
Gabriela G. Atsepoyi (Spelman College)

Gifty Dominah (Oberlin College)
Hannah Lust (University of Maine Farmington)
Jahaira C. Vera (University of Arizona)
Joan Tran Texas (Southern University)
Jonathan Tyson (Rider University)
Kaylin M. White (Spelman College)
La'Naisha Proctor (Paine College)
Leonardo D. Gonzalez Parrilla (University of Puerto Rico Medical Sciences)
Lizbeth Perez-Castro (University of Puerto Rico-Cayey)
Madalyn T. Bryant (Fort Valley State University)
Maya Stephens (Paine College)
Melbaliz Velez Afanador (University of Puerto Rico-Arecibo)
Nancy C. Urbano (St. Mary's University)
Samantha J. Cardoza (US Coast Guard Academy)
Scott Freeburg (Kenyon College)
Stephanie Moreno-Lopez (University of Puerto Rico Medical Sciences)
Tamara M. Spikes (Spelman College)
Tiani C. Calip (University of California-Davis)
Tyler J. Wishard (University of California-San Diego)
Victoria R. Stephens (Albany State University)
Yessinia Lopez (John Jay College of Criminal Justice)
Zuania I. Cordero Badillo (University of Puerto Rico-Rio Piedras)

2015 Faculty Advisor Recipients

Felicia Jefferson (Spelman College)
Gisela Spieler-Persad (Rio Hondo College)
Gunnar Kwakye (Oberlin College)
Koscielski Lukasz Koscielski (University of Puerto Rico-Cayey)
Momoh Yakubu (Texas Southern University)

- **2015 SOT Undergraduate Intern Travel Award**: Knowing that experience in a research laboratory is the best way to encourage undergraduate students to pursue graduate education, SOT supports summer internships and then provides travel support for some of the interns to present their research at the Society's Annual Meeting & ToxExpo.

2015 Recipients

Hillary Markey (Central Michigan University)
Royce Nichols (King University)

"Toxicological concerns are not limited to one segment of the population or one area of the globe, which is why the Society welcomes members from around the world. In order to ensure that toxicology is being spread across geographic and ethnic boundaries, the SOT Awards program supports the inclusion of diverse scientists in many ways," says Dr. Kaminski.

- **2015 SOT Global Senior Scholar Exchange Program**: To increase toxicology capacity in developing countries, SOT funds two mid-career to senior scholar toxicologists from developing countries to attend the SOT Annual Meeting & ToxExpo and spend about four weeks with one or more SOT member hosts from established toxicology programs The host will in turn visit the scholar's institution.

2015 Scholars and Hosts

Scholar: Sunisa Chaiklieng, Dr Biol Hum, Khon Kaen University, Thailand
Host: Norbert E. Kaminski, PhD, Michigan State University

Scholar: Deepak Dhakal, MS, Tribhuvan University, Nepal
Host: Aaron Barchowsky, PhD, University of Pittsburgh

- **2015 SOT/AstraZeneca/SOT Endowment Fund/IUTOX Travel Awards**: This award supports the travel of senior scientists from countries where toxicology is underrepresented to the Society's Annual Meeting & ToxExpo.

  2015 Recipients

  Amos O. Abolaji, PhD (University of Ibadan, Nigeria)
  Carine J. Marks, MSc (Tygerberg Hospital Poison Centre, Stellenbosch University, South Africa)
  Davaadorj Rendoo, MD (National Institute for Public Health, Mongolia)
  Huawei Duan, PhD (National Institute of Occupational Health and Poison Control, China)
  Jin Hongtao, PhD (New Drug Safety Evaluation Center of Chinese Academy of Medical Sciences, China)
  Khaled Abdou, PhD (Beni Suef University, Egypt)
  Motunrayo G. Akande, PhD (University of Abuja, Nigeria)
  Palanisamy Sankar, PhD (Tamil Nadu Veterinary and Animal Sciences University, India)
  Patient Guedenon, PhD (University of Abomey-Calavi, Benin)
  Tawit Suriyo, PhD (Chulabhorn Research Institute, Thailand)

- **2015 SOT Perry J. Gehring Diversity Student Travel Award**: Supported by the SOT Endowment Fund, this award recognizes a previous SOT Undergraduate Education Program participant who is from a racial/ethnic group underrepresented in toxicology and is presenting a paper at the Society's Annual Meeting & ToxExpo. The 2015 recipient is **Latisha Pryor**, Fort Valley State University, who will be presenting a paper titled "An Analysis of Varskin 5 Radiation Dosimetry Software."

Additional recipients of 2015 SOT Awards, including more top scientists, will be announced tomorrow. Previously announced award recipients are:

2015 SOT Achievement Award: Vishal S. Vaidya, PhD, Harvard Medical School.
2015 SOT Arnold J. Lehman Award: Richard A. Becker, PhD, DABT, American Chemistry Council.
2015 SOT Distinguished Toxicology Scholar Award: Ian Kimber, OBE, PhD, FSB, FBTS, ATS, University of Manchester, United Kingdom.
2015 SOT Enhancement of Animal Welfare Award: Marcel Leist, PhD, University of Konstanz, Germany.
2015 SOT Merit Award: Günter Oberdörster, DVM, PhD, University of Rochester Medical Center.
2015 SOT Public Communications Award: Andrew D. Maynard, PhD, University of Michigan Department of Environmental Health Sciences.
2015 SOT Translational Impact Award: Jeff Burgess, MD, University of Arizona.
2015 SOT Colgate-Palmolive Grant for Alternative Research: Alfredo Miranda de Goes, PhD, Universidade Federal de Minas Gerais, and Lei Li Kerr, Miami University.
2015 SOT Colgate-Palmolive Postdoctoral Fellowship Award in In Vitro Toxicology: Fabian A. Grimm, PhD, Texas A&M University.
2015 SOT Colgate-Palmolive Award for Student Research Training in Alternative Methods: Prajakta Shimpi, MS, University of Rhode Island.

Fourth Annual SOT Mentoring Breakfast, Monday, March 23

The Sociey of Toxicology (SOT) Mentoring Breakfast Planning Committee is pleased to announce the Fourth Annual SOT Mentoring Breakfast that will be held at the SOT 2015 Annual Meeting in San Diego, California, on Monday, March 23 from 6:15 am–7:45 am! This is a fantastic opportunity for those interested in developing relationships with career mentors. Attendees will experience the following:

- Gain insights to the successful development of a constructive mentoring relationship;
- Provide mentoring facilitators with information about what they are looking for in a mentor; and
- Be personally matched with a mentor who is an SOT member.

This event is limited to 50 mentees on a first-come, first-served basis. An attendance fee of $10 includes a continental breakfast. Interested mentees can sign up for the SOT Mentoring Breakfast through the SOT Online Registration.

Are you Interested in Becoming a Facilitator?

Facilitators will work with a small group of prospective mentees (3–5) to better understand their goals and needs and help to recommend an ideal mentoring candidate for the mentee. A facilitator also may share experiences and tips that have helped guide them in their own career path. A facilitator can:

- Learn more about the career development needs of today's Graduate Students and Postdocs;
- Learn more about their own career development; and
- How best to assess the goals and needs of those around them.

Additional training will be arranged for interested facilitators to help them make the most of this opportunity. If you are interested in serving as a facilitator for the Mentoring Breakfast, please contact Erica Bruce for more information.

Please note: Only mentees interested in being matched with a mentor should register for this event. Matching of the registered mentees with a mentor will take place shortly following the SOT 2015 Annual Meeting. If you are interested in being considered as a mentor, please sign up through the SOT Mentor Match website. The Mentor Match system is a convenient, online system available year round to help link like-minded toxicologists seeking either mentors or mentees.

SOT Annual Meeting On-Site Job Bank—It's Cost-Effective and Confidential

Located in the San Diego Convention Center in 23A (Office) and 23BC (Interview Rooms), the SOT Job Bank Center provides Annual Meeting attendees with access to the Job Bank system as well as assistance in facilitating interviews at the SOT Annual Meeting. For SOT members, the job search service is provided free of charge. Be sure to log into the SOT Job Bank before the Annual Meeting to browse all of the open positions. For employers, please be sure to post your position ahead of time to maximize your position's visibility to candidates.

Personalized assistance is available if you are new to the Job Bank or have questions. For your convenience, printers will be available for producing hard copies of candidate profiles and position descriptions. All candidates and positions must be sought online. The Center is available during the following hours of operation:

Sunday, March 22.....1:00 PM–5:00 PM

Monday, March 23.....9:00 AM–5:00 PM

Tuesday, March 24.....8:30 AM–5:00 PM

Wednesday, March 25.....8:30 AM–5:00 PM

Employers recognize and appreciate that the SOT Job Bank Center provides a cost-effective and efficient way to meet and interview standout candidates. SOT provides eight interview rooms on-site, Sunday through Wednesday, during the hours listed above. Employers may reserve interview rooms ahead of time or at the meeting on a first-come, first-served

basis.

For additional information, contact Kevin Merritt at SOT Headquarters or call 703.438.3115.

CRAD Corner

This is the first of what is hoped to be a periodic update of activities from the Career Resource and Development Committee (CRAD) that could help the membership plan career development sessions for the Society of Toxicology (SOT) Annual Meeting, develop mentoring programs, and learn of other initiatives from CRAD. We call this "CRAD Corner."

SOT CRAD Committee: Education and Career Development Session Proposals

CRAD has undertaken an effort to help facilitate the building and submission of Education and Career Development Sessions for the future SOT Annual Meetings. Using information on successful sessions from previous Annual Meetings, the CRAD Committee has developed the outline below to help encourage session creation and submission. The listed sessions are not intended to serve as a definitive roadmap, but rather to help stimulate and encourage member interest in session development. Another goal in sharing this session development plan is to help connect members interested in collaboration on different session topics. If you have an idea for an Education and Career Development Session, chances are other SOT members also share your interests for a specific session topic.

If you are interested in one of the listed topics, or have a presentation topic that would fit into any of the listed session topics, you are encouraged to contact Kevin Merritt (SOT Staff Liaison for CRAD) with your session interests or presentation ideas. The CRAD Committee will work to link members with similar ideas and presentations to help with session development.

If your session will be seeking CRAD endorsement, you are welcome to send your proposal to the current CRAD Liaison, Kevin Merritt, for feedback from the committee before you submit your session for an upcoming SOT Annual Meeting. More information on session submission can be found on the SOT website.

Category	2016	2017	2018
Skills New Toxicologist	Interviewing and Negotiations Presenting Oneself on Paper: CV, Cover letter – what defines a toxicologist? Using Social Media for Job Opportunities	Toxicological Writing for Manuscripts, Regulatory Submissions (2011) Communication Skills: Presenting to the Public	Training and Future Demand for Toxicologists Creating a Successful Career Path/ Job Promotions or Changing Positions
Early/Mid-Career Toxicologists	Negotiations in Your Career: Realistic Expectations – Promotions and Finances Balancing Life and Work in a Demanding Career	Effective Networking and Mentoring Mentoring and Networking: Providing Leadership and Experience Mentoring Minorities	Management Skills in Good and Poor Economic Environments Understanding Cultural Differences: Global Toxicology
Careers in Toxicology	Transitions from Bench to New Career Opportunities/Transitioning from a Graduate Student/Post-Doc to a Career in Toxicology Career Opportunities in the Medical Device Field Careers in the Private Sector	Consulting: New Career or Interim Position Transitioning from the field – complete retirement or alternative opportunities	Growing International Toxicology Job Market Toxicology outside of academia
Educating Toxicologists	Alternative Training in Toxicology: The Next Generation NIH Goals for Training of Scientists: Impact on University Curriculum and Training	Grantsmanship: Funding for Education and Research Constraints of Budgets in Academia, Government and Industry	Training and Future Demand for Toxicologists New curricula for toxicology training – developing new degree programs to meet the need Scientific Teaching Core Values Improving Undergraduate Education
Miscellaneous Topics	Certifications in Toxicology	Data, Publication and Ethics in Toxicology	

Mentoring Programs from CRAD: Matching Funds Available

CRAD offers Mentoring Initiative Matching Funds to encourage the development and expansion of mentoring programs within SOT. This fiscal year, CRAD has funds to support these mentoring initiatives in SOT component groups. A reminder has recently been sent to SOT Component Group officers about the availability of the funds and how to apply. The deadline for these applications is January 30. Interested SOT Component Groups may apply for these funds. Please contact Kevin Merritt at SOT Headquarters if you have any questions.

Research Funding Committee and CRAD

In early 2014, the Research Funding Committee (RFC) and CRAD were merged into a single committee to build on the compatible efforts that each committee had undertaken and accomplished. In 2014, the committee continued to develop the initiatives the RFC had historically managed including the Research Funding Information Room, Brown Bag lunch, and other programs to heighten awareness of research funding opportunities.

Into 2015, CRAD is committed to continue and expand these programs and provide greater awareness to those interested in learning about research opportunities. Look to attend the Research Funding—Brown Bag Luncheon on Monday, March 23, from 12:00 pm to 1:30 pm at the SOT Annual Meeting. All attendees are welcome to attend the luncheon and come to the Research Funding Information Room open on Tuesday and Wednesday, March 24 and 25 during the SOT Annual Meeting.

At the Research Funding Information Room, interested attendees can have one-on-one conversations with Program and Scientific Review Officers from various agencies that award grants in toxicological research. Attendees may learn about the various grants offered as well as the different processes involved in obtaining a grant. New Investigators are especially encouraged to attend.

Science News

Science News Alert: Upcoming SOT-Sponsored Meetings

The upcoming meetings sponsored by the Society of Toxicology may be of interest to you. For specific information, please contact the society organizing the event.

Toxicology for Industrial and Regulatory Scientists—April 27–May 1

This annual American College of Toxicology (ACT) course, Toxicology for Industrial and Regulatory Scientists, will be held April 27–May 1 at the MedImmune Headquarters, Gaithersburg, Maryland. This course provides a basic general training in toxicology. Using pharmaceutical development as an example, participants will obtain an overall understanding of the principles of toxicology and nonclinical safety evaluation. The course will include discussion of regulatory case studies and hands-on analyses of nonclinical data and is intended to benefit individuals working with small and large molecules from biotechnology and pharmaceutical companies, CROs, and regulatory agencies, or individuals interested in or currently practicing toxicology. A course flyer is available on the ACT website. For additional information and to register, please visit the ACT website.

Genetic Toxicology Association Meeting—May 6–7

The Genetic Toxicology Association Meeting will be held May 6–7, 2015, in Newark, Delaware at the University of Delaware, Clayton Hall. The scientific meeting program consists of the following symposium topics: 1) OECD Guidance Updates; 2) Risk Management Studies (Case Studies); 3) Genetic Toxicology Evaluation, Risk Assessment, and Regulatory Guidelines Across Industries; 4) Dose-Response Modeling and Quantitative Risk Assessment; and 5) New Technologies—Adverse Outcome Pathways. Speakers will include leading national and international scientists from the chemical and pharmaceutical industries, regulatory agencies, and academia. In addition there are two special workshop events preceding the main meeting and a student poster competition. The deadline for poster abstract submission to be considered for a travel award is March 6. The deadline for early discounted meeting registration is April 6. For more details regarding the meeting, please visit the GTA website.

NTP Systematic Review Process: Handbook Now Available

The National Toxicology Program (NTP) has been taking a lead role in developing a systematic review process for literature based evaluations in environmental health sciences. Systematic review methods include predefined procedures to identify, select, critically assess, and synthesize evidence from scientific studies to reach conclusions. These techniques increase the transparency and objectivity in the course of answering specific research questions. The NTP Office of Health Assessment and Translation (OHAT) has developed a seven-step systematic review process that is nicely described in a new handbook that went online in January.

The "Handbook for Conducting a Literature-Based Health Assessment Using OHAT Approach for Systematic Review and Evidence Integration" provides standard operating procedures for the implementation of systematic review in OHAT evaluations. The handbook was developed based on lessons learned from developing two case studies, public comments, and from discussions with experts in toxicology, public health, and systematic review methods.

Along with the handbook, OHAT has released an updated approach or tool for assessing the risk of bias in a study's findings. The OHAT risk-of-bias tool outlines procedures for evaluating risk of bias for both human and animal studies and is similar to methods used to critically assess clinical trials of new drugs.

Having and using an established systematic review process lets everyone see exactly how conclusions about potential human health hazards are reached. Also, NTP is hopeful that once the methodology becomes adopted more widely, the reproducibility of environmental health studies will be enhanced.

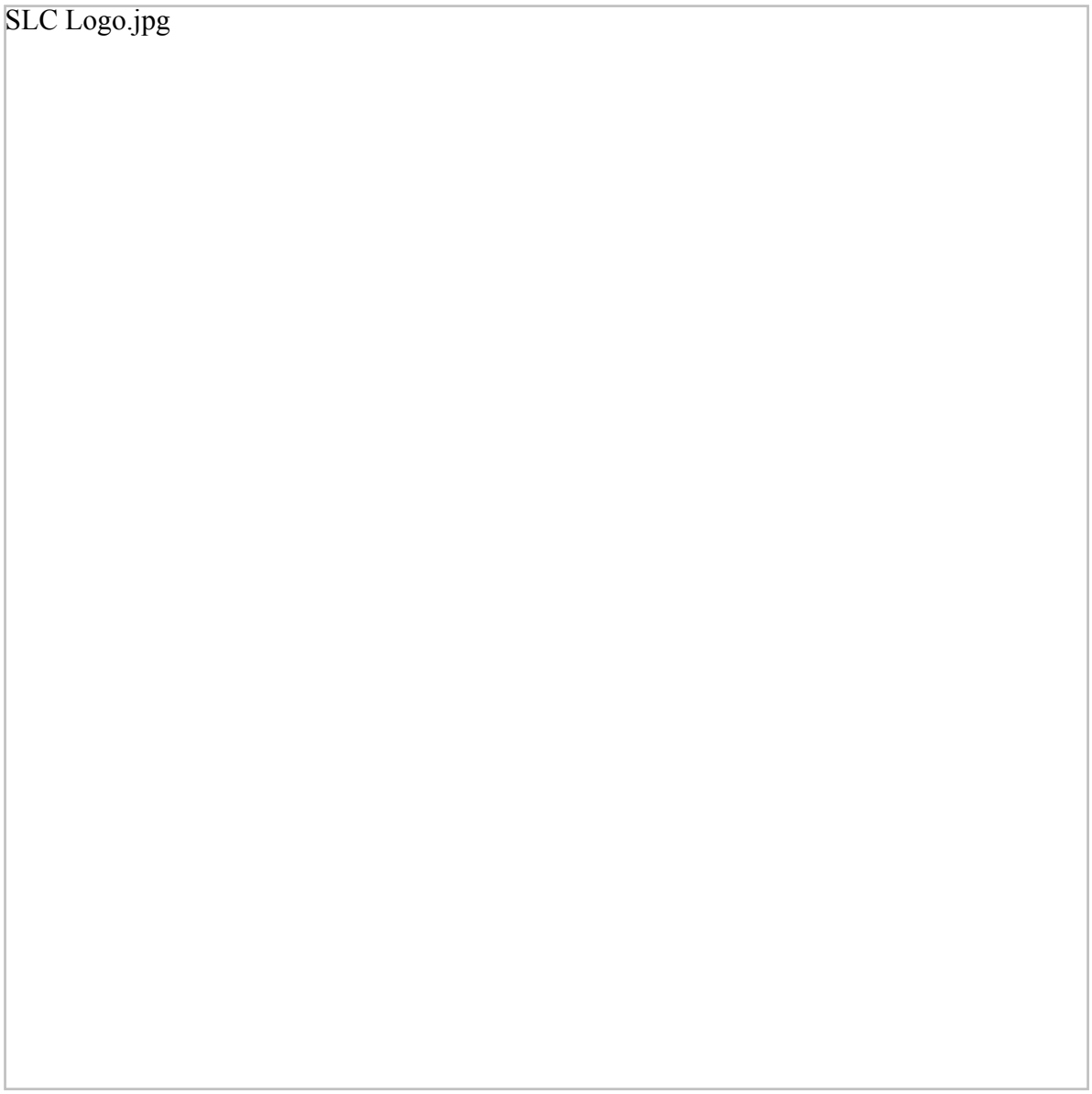
NIH CSR Peer Review Notes Available Online

The National Institutes of Health Center for Scientific Review (NIH CSR) publishes Peer Review Notes to inform reviewers, NIH staff, and others interested in news related to NIH grant application review policies, procedures, and plans. The most recent issue (January 2015) includes:

- Insiders Guide to Peer Review for Applicants
- NIH Simplifies Late Application Submission Policy
- CSR Posts Webinar Videos for New Applicants
- Things to Remember About R15 Applications Reviews
- New Videos for Reviewers to Better Navigate Internet Assisted Review

To access Peer Review Notes, please visit the NIH website.

SLC Webinar on Nonclinical Safety Testing Draws Over 700 Participants



On Wednesday, February 4, 2015, the Scientific Liaison Coalition (SLC) hosted a webinar, “Prediction is Very Difficult, Especially if it is About the Future: How Well Does Toxicology Testing Predict Clinical Outcomes?” presented by Thomas W. Jones, Chief Scientific Officer, Toxicology and Pathology, Eli Lilly and Company. An overview of this webinar was presented in a recent blog posting.

Over 700 individuals engaged in this webinar that addressed the debate around the future of nonclinical safety testing. This presentation by Dr. Jones considered a quantitative framework with which nonclinical safety model performance can be assessed, highlighted the data needed to enable such an approach, and discussed the implications of new model and technology applications in R&D. SLC 2014–2015 Chair Mary Jeanne Kallman hosted the webinar and immediate Past Chair Kevin McDorman served as the moderator.

Scientists from around the globe participated in this webinar, including attendees from Belgium, Brazil, Canada, China, Denmark, France, Germany, India, Italy, Spain, Switzerland, Taiwan, United Kingdom, and United States.

This webinar is a demonstration of the SLC mission of “improving the ability of societies to partner with other domestic and international organizations that have objectives consistent with the goal of increasing the impact of the science of toxicology to improve public health."

You can access the webinar recording on the SLC website. For additional information about the SLC, please visit the SLC website and/or contact Marcia Lawson.

Science News Alert: Upcoming Meetings—EUROTOX 2015 and FutureTox III

The upcoming conferences below may be of interest to you.

EUROTOX 2015: Call for Abstracts, Deadline March 13

The abstract submission and early registration for the 51st Congress of European Societies of Toxicology is now open. EUROTOX 2015 will take place from September 13–16, 2015, in the Alfândega Congress Centre in Porto, Portugal. Approximately 1,500 participants from around the world as well as more than 50 exhibitors from the pharmaceutical, chemical, and biotechnological industry are expected to attend. The deadline for abstract submission is March 13, 2015, 12.00 pm/ midnight (CET). The deadline for early bird registration is May 29, 2015, 12.00 pm/ midnight (CET). The Congress Organizers are delighted to announce that EUROTOX 2015 will provide a number of bursaries for attendance at the congress. The deadline for the Travel Bursary Application is April 15, 2015, 12.00 pm/midnight (CET). For additonal information, please visit the EUROTOX 2015 website.

FutureTox III Bridges for Translation: Save The Date November 19–20, 2015

FutureTox III Bridges for Translation—Transforming 21st Century Science into Risk Assessment and Regulatory Decision-Making will be held November 19–20, 2015 at the Hilton Crystal City at Washington Reagan National Airport, Arlington, Virginia. The overarching objectives of the meeting include advancing the cornerstones for high-throughput risk assessment; taking TT21 C *in vitro* data and *in silico* models forward while reducing reliance on animal testing; and exploring progress and identifying challenges in implementing the emerging "big data" toolbox for regulatory decision-making. The conference will include plenary and poster sessions as well as topical breakout groups. The conference website will be available soon on the Society of Toxicology (SOT) Contemporary Concepts in Toxicology (CCT) website.

ToxSci February 2015 Issue Online: Contemporary Review in Toxicology and FutureTox II Forum

The February 2015, Vol. 143, No. 2 issue of *Toxicological Sciences* (*ToxSci*) is now available online. To have the email Table of Contents (eTOC) alerts delivered to you as well as Advance Access notification of the latest papers and research in *Toxicological Sciences* as soon as they are accepted and posted to the website, register online.

ToxSci Editor-in-Chief Gary W. Miller writes, "This issue features our first Contemporary Review in Toxicology on links between air pollution and diabetes, as well as our previous format of review on acrolein toxicity. As noted in the November editorial, we anticipate that the Contemporary Review in Toxicology will become our predominant format for reviews. The new format focuses on recent advances in the field and provides concise summaries and analysis of key findings. In addition to the articles highlighted…, there is a wealth of exciting papers in this issue. A Forum article provides an update on the efforts of the Future Tox II initiative, articles on carbon nanotubes and tungsten carbide-cobalt nanoparticles address concerns of these important industrial products, and several articles address the always-important topic of biomarkers of toxicity. I encourage the readers to Look inside *ToxSci* for the best original research in the field of toxicology."

The mission of *ToxSci*, the official journal of the Society of Toxicology, is to publish the most influential research in the field of toxicology.

NIEHS Emerging Science for Environmental Health Decisions: Upcoming

Workshops Announced

Through its regular workshop series, Emerging Science for Environmental Health Decisions, the National Institute of Environmental Health Sciences explores the potential for new methods and approaches to advance our understanding of environmental impacts on human health. These free, two-day workshops are organized by a National Academy of Sciences committee and bring together participants from government, industry, nongovernmental organizations, and the academic community.

The workshops, which are typically held at the National Academy of Sciences building in Washington, DC and webcast, consist of presentations from leading researchers and policy experts, interactive panel discussions and Q&A sessions, and the opportunity to network with fellow participants over lunch and at breaks.

Recent workshops have explored topics including modeling the health impacts of climate change, the potential of the tissue chip, understanding the microbiome, and making use of "big" data. The highlights, talking points, and take-home messages of each workshop are captured in Emerging Science newsletters and summaries, which are available on the Emerging Science website along with other resources such as videos of workshop presentations and discussions.

The next three workshops—scheduled for May 28–29, 2015; September 30–October 1, 2015; and January 14–15, 2016—are expected to cover metabolomics related to the exposome, advances in the study of interindividual variability and their implications, and microbiome functions related to environmental health. As planning for the meetings continues, please visit the Emerging Science website to access workshop agendas, register to attend, and subscribe to receive updates about new resources.

Save the Date: 2015 NIH Regional Seminar in Baltimore, May 6–8

Mark your calendar for the 2015 National Institutes of Health (NIH) Regional Seminar on Program Funding and Grants Administration in Baltimore, Maryland—May 6–8, 2015. This two-day seminar, with an optional third day of pre-seminar workshops, is ideal for anyone in the extramural research community who is new to working with NIH grants, including administrators, new and early stage investigators, and grant writers.

Registration will open in early 2015. In the meantime, you can access more information on the NIH website. If these dates don't work for you, NIH is hoping to offer a second seminar in late summer or early fall of 2015 in San Diego, California. For additional information, see the NIH website.

WHO Chemical Risk Assessment Network

In October of 2014, the World Health Organizaiton (WHO) Chemical Risk Assessment Network held its first face-to-face meeting in Paris. WHO established the Chemical Risk Assessment Network in 2013 as a voluntary collaboration aiming "to improve chemical risk assessment globally through facilitating sustainable interaction between institutions on chemical risk assessment." The Network's first participant meeting in Paris took place at the French Agency for Food, Environmental, and Occupational Health and Safety and was attended by representatives of 55 institutions from 29 different nations.

At the lively meeting in Paris, representatives of agencies, academic groups, and nongovernmental organizations from throughout the world explored a variety of risk assessment challenges and proposed themes of common interest. Key themes included:

- Identification of emerging risks;
- Characterization of uncertainty in risk assessment;
- Approaches to scale up capacity building; and
- Methods to establish a common understanding of systematic literature review of toxicological data.

Network participants also identified topics of interest that span international boundaries and elected to move forward on the development of action plans for multiple projects. A team of network members will evaluate activities related to the coordination of training needs and support for training in Africa and Asia. To address the unique challenges identified by participants from developing countries, particularly challenges posed by limited data, the network will establish a working group to support researchers in these countries.

Additional activities being undertaken by the network include building capacity in risk assessment, support for a post-graduate training course on risk assessment, the expansion of the Risk Assessment Training Database, and multiple collaborative papers and research efforts.

To learn about network activities and participation eligibility please visit the WHO website.

Research Funding

Maximizing Investigator's Research Award (R35)

Supporting fundamental research by funding individual projects has a number of consequences for the efficiency and effectiveness of the biomedical research enterprise in the US. To address these issues and increase the efficiency and efficacy of its funding mechanisms, the National lnstitute of General Medical Sciences (NIGMS) is launching a pilot program that will award a single grant to provide support for all of the research in an investigator's laboratory that is related to the mission of NIGMS. It is anticipated that this new funding mechanism will achieve the following:

- Increase the stability of funding for NIGMS-supported investigators, which could enhance their ability to take on ambitious scientific projects and approach problems more creatively.
- Increase flexibility for investigators to follow important new research directions as opportunities arise, rather than being bound to specific aims proposed in advance of the studies.
- More widely distribute funding among the nation's highly talented and promising investigators to increase overall scientific productivity and the chances for important breakthroughs.
- Reduce the time spent by researchers writing and reviewing grant applications, allowing them to spend more time conducting research.
- Enable principal investigators to devote more time and energy to mentoring junior scientists in a more stable research environment.

The purpose of this Funding Opportunity Announcement is to test the feasibility of this grant mechanism through a pilot program with restricted eligibility. For additional information, please visit the NIH website.

Deadline: May 20, 2015

Notice of Intent to Publish FOA for Collaborative Clinical and Translational Science Award

Notice of Intent to Publish a Funding Opportunity Announcement for Collaborative Innovation Award, Clinical and Translational Science Award Program (U01)

The National Center for Advancing Translational Sciences (NCATS) intends to promote a new initiative involving collaborative innovative research in both translational science and its methods, within the Clinical and Translational Science Award (CTSA) consortium. It is anticipated that the combined effort of three or more CTSA hubs in flexible networks will substantially enhance the effectiveness of the consortium to address high priority translational research questions.

Two companion Funding Opportunity Announcements (FOAs) for the Collaborative Innovation Awards are expected to be published in February 2015. These FOAs will utilize the X02 pre-application activity code, with pre-applications due in May 2015, and the U01 Research Project—Cooperative Agreement, with applications due in winter 2015.

This Notice is being provided to allow potential applicants sufficient time to develop meaningful collaborations and responsive projects for the U01 application.

Research Initiative Details

This Notice encourages investigators with expertise and insights in the area of innovation in clinical and translational research to begin to consider applying for the U01 FOA.

The U01 FOA will invite applications for innovative collaborative investigations (involving three or more CTSA sites) into improvements of the methods of translational research, at any step in the translational spectrum (T1-T4) that have the characteristics described on the NIH website.

Key Dates

Estimated Publication Date of Announcement: February 2015

First Estimated Application Due Date: December 2015

Earliest Estimated Award Date: June 2016

Earliest Estimated Start Date: July 2016

For additional information, please visit the NIH website.

Exploratory/Developmental Grants Program for Basic Cancer Research in Cancer Health Disparities

This Funding Opportunity Announcement (FOA) encourages grant applications from investigators interested in conducting basic research studies into the biological/genetic causes and mechanisms of cancer health disparities. These awards will support pilot and feasibility studies designed to investigate biological/genetic bases of cancer disparities, such as (1) mechanistic studies of biological factors associated with cancer disparities, (2) the development and testing of new methodologies and models, and (3) secondary data analyses. This FOA also is designed to aid and facilitate the growth of a nationwide cohort of scientists with a high level of basic research expertise in cancer health disparities research who can expand available resources and tools, such as biospecimens, cell lines, and methods that are necessary to conduct basic research in cancer health disparities. In addition, the FOA will further the development of scientific areas, providing support for early–stage exploratory projects that lead to future in-depth mechanistic studies (such as R01 projects) of the biology of cancer health disparities For additonal information, please visit the NIH website.

Deadlines: June 17, 2015; November 17, 2015; June 17, 2016; November 17, 2016; June 19, 2017; November 17, 2017

Basic Cancer Research in Cancer Health Disparities (R01)

This Funding Opportunity Announcement (FOA) encourages grant applications from investigators interested in conducting basic, mechanistic research into the biological/genetic causes of cancer health disparities. These research project grants (R01) will support innovative studies designed to investigate biological/genetic bases of cancer disparities, such as (1) mechanistic studies of biological factors associated with cancer disparities, including those related to basic research in cancer biology or cancer prevention intervention strategies, (2) the development and testing of new methodologies and models, and (3) secondary data analyses. This FOA also is designed to aid and facilitate the growth of a nationwide cohort of scientists with a high level of basic research expertise in cancer health disparities research who can expand available resources and tools, such as biospecimens, cell lines, and methods that are necessary to conduct basic research in cancer health disparities. For more information, please visit the NIH website.

Deadlines: June 17, 2015; November 17, 2015; June 17, 2016; November 17, 2016; June 19, 2017; November 17, 2017

Intramural NIGMS Postdoctoral Research Associate Program

The overarching goal of the National Institute of General Medical Sciences (NIGMS) Postdoctoral Research Associate (PRAT) Program is to provide high quality postdoctoral research training in the basic biomedical sciences, in National Institutes of Health (NIH) intramural research laboratories, to a diverse group of postdoctoral fellows to prepare them for leadership positions in biomedical careers. The research projects proposed should focus on NIGMS mission-related areas of basic biomedical science. These include cell biology, biophysics, genetics, developmental biology, pharmacology, physiology, biological chemistry, computational biology, technology development, and bioinformatics. Studies employing model organisms are encouraged. The PRAT Program distinguishes itself by providing, in addition to the laboratory research experience, a structured training environment with extensive career development and networking opportunities planned and supported by this program.

Deadlines: March 17, 2015; October 2, 2015; October 3, 2016; October 3, 2017. For additional information, please visit the NIH website.

Legislative and Regulatory Update

SOT Enters into Partnership with DOI's Strategic Sciences Group

I am pleased to announce a new partnership that has recently been formed between the Society of Toxicology (SOT) and the US Department of the Interior (DOI). Specifically, the Society will be assisting the DOI's Strategic Sciences Group.

The Strategic Sciences Group was formed by Secretarial Order 3188 on January 3, 2012, with a mission "to provide the Department of the Interior (Department) with science-based assessments and interdisciplinary scenarios of environmental crises affecting Departmental resources; rapidly assemble trained teams of scientists to conduct such work during environmental crises; and provide the results of this work to the Secretary and Departmental leadership to support decision-making during crises."

To ensure that its recommendations represent the breadth of science issues that emerge during environmental crises, the Strategic Sciences Group is partnering with government agencies, associations, nonprofit societies, and others to establish a mechanism by which a uniquely qualified team of experts can be assembled rapidly in the event of an environmental crisis.

The partnership is simple: When an environmental crisis occurs and the DOI determines that an expert science working group is needed, the Strategic Sciences Group will reach out to its partners to secure a list of vetted, recommended experts. These individuals will then be contacted by the Strategic Sciences Group to participate in the rapid response working group. As described by the Strategic Sciences Group, these working teams are not first-responders at the spot of the crisis, but instead are assembled to develop a long-range view and recommendations regarding animal, human, and environmental health concerns that may arise from the crisis.

SOT Council felt that this work strongly coincides with SOT's mission, which is why we agreed to become a Strategic Sciences Group partner and anticipate a fruitful collaboration.

SOT TSCA Reform Editorial Published in Roll Call Online

Submitted by Daland R. Juberg, Chair, SOT TSCA Task Force

On Monday, February 9, 2015, Roll Call online published an opinion editorial by Society of Toxicology (SOT) 2014–2015 President Norbert E. Kaminski, "TSCA Reform Should Embrace the Best Application of Toxicological Science—a Perspective from its Practitioners|Commentary." In this editorial, Dr. Kaminski, in drawing upon the experiences and recent activity of the SOT TSCA Task Force, notes that the 1976 Toxic Substances Control Act (TSCA) is "outdated and in serious need of modernization." This editorial provides a discussion of the important role of Toxicology that

“provides science and information essential to supporting innovation and addressing human and environmental health, and it is essential that any TSCA reform legislation reflect the human health and economic value of science-informed decision making.”

Dr. Kaminski also includes the three principles articulated by the SOT TSCA Task Force and conveyed to Congressional members since the formation of this group in 2010.

1. Ensure the revised legislation affords flexibility in selection of the best available science for generating and evaluating information used in the safety and risk assessment process.
2. Ensure protection of the authority of the US Environmental Protection Agency, working with the scientific community, to judge when and how to apply new techniques and methods.
3. Ensure the terms and concepts used in the legislative language that apply to the science of toxicology are consistent, accurate, and unambiguous.

Moreover, he emphasized the application of the “best available science” because “understanding is not static but is constantly evolving. Congress should resist the temptation to try to spell out specific scientific methods in law and allow scientific evolutionary progress to continue.” He concluded by stating that “SOT is deeply committed to providing knowledge and working with all stakeholders so that sound, progressive and protective TSCA legislation will emerge in 2015." To read the complete opinion editorial, visit the Roll Call website.

SOT Members: US EPA Requesting Nominations to Pesticide Program Dialogue Committee

The US Environmental Protection Agency (EPA) Office of Pesticide Programs is inviting nominations from a diverse range of qualified candidates to be considered for appointment to the Pesticide Program Dialogue Committee (PPDC).

The PPDC was chartered to provide advice and recommendations to the US EPA Administrator on a broad range of issues concerning pesticide regulatory development and reform initiatives, evolving public policy and program implementation issues, and science issues associated with evaluating and reducing risk from pesticide use. Nominations must be emailed or postmarked no later than March 16, 2015.

To maintain the representation outlined by the charter, nominees will be selected to represent: environmental/public interest and animal rights groups; farm worker organizations; pesticide industry and trade associations; pesticide user, grower, and commodity groups; Federal/State/local and tribal governments; academia; and public health organizations. Vacancies are expected to be filled by early summer 2015. For additional information, please refer to the Federal Register notice of this announcement.

SOT Members: US FDA Requests Nominations to Serve on Science Board

The US Food and Drug Administration (FDA) has announced a request for nominations to serve on the Science Board to the US FDA, Office of the Commissioner, Office of the Chief Scientist. The Science Board shall provide advice to the Commissioner and other appropriate officials on specific complex scientific and technical issues important to US FDA and its mission, including emerging issues in the scientific community. Nominations received on or before March 24, 2015, will be given first consideration for membership on this Board by this agency.

The members of this board are authorities knowledgeable in the fields of: food science, safety, and nutrition; chemistry; pharmacology; translational and clinical medicine and research; toxicology; biostatistics; medical devices; imaging; robotics; cell and tissue-based products; regenerative medicine, public health, and epidemiology; international health and regulation; product safety; product manufacturing sciences and quality; and other scientific areas relevant to US FDA-regulated products such as systems biology, informatics, nanotechnology, and combination products.

For additional information about the nomination process, please review the Federal Register Announcement.

Position Advertisement(s)

Postdoctoral Fellow Annoucement: Department of Environmental Health, Indiana University

SCHOOL OF PUBLIC HEALTH

INDIANA UNIVERSITY

Department of Environmental Health

Bloomington

The Department of Environmental Health at the Indiana University School of Public Health is seeking a highly motivated individual to fill a postdoctoral fellow position with Professor James E. Klaunig to work in the areas of chemically (both environmental and pharmaceutical) induced liver toxicity and carcinogenesis.

Job Description: The position will involve research on the following projects: (1) an NIH funded U01 grant to develop a "multiscale mechanistic simulation of acetaminophen induced liver toxicity"; (2) an industry-funded project to study the "mechanisms of chemically induced liver focal necrosis in rats."

Qualifications: Applicants should have obtained a PhD degree within the last three years in Toxicology, Environmental Health/Toxicology, Cancer Biology, or a related field. Prior experience with small laboratory animals (mice and rats), histopathology, and immunohistochemistry are strongly preferred; experience with cell culture, molecular biology, and instrumental analysis (HPLC, etc.) are desirable. Successful candidates will exhibit strong self-motivation, independence, innovative thinking, as well as great communication skills.

The position may be funded for up to three years and provides resources for travel to scientific meetings and continued professional development. This is a 12 month appointment with an anticipated start date of 6/1/2015.

Open until a suitable candidate is identified, with the first round of reviews anticipated to begin by 3/1/2015.

Interested candidates should review the application requirements and submit their application at the Indiana University website. Questions regarding the position or application process can be directed to: James Klaunig or via postal mail at Environmental Health Search and Screen Committee, c/o James Klaunig, Professor, Department of Environmental Health, School Public Health-Bloomington, Indiana University, 1025 East 7th Street, SPH C033, Bloomington, IN 47405-4801

Applications should include: cover letter, *curriculum vitae,* and a list of three (3) references. Finalists will be asked to contact references to obtain support letters.

Indiana University is an equal employment and affirmative action employer and a provider of ADA services. All qualified applicants will receive consideration for employment without regard to age, ethnicity, color, race, religion, sex, sexual orientation or identity, national origin, disability status, or protected veteran status.

Postdoctoral Fellow Announcement: Department of Environmental Health,

Indiana University

SCHOOL OF PUBLIC HEALTH

INDIANA UNIVERSITY

Department of Environmental Health
Bloomington

A postdoctoral fellow position is available in the laboratory of Professor James Klaunig in the Department of Environmental Health at Indiana University Bloomington. The Klaunig Lab is involved in performing and publishing high-quality, peer-reviewed research in the areas of toxicology, carcinogenesis, and toxicological pathology. The research has been devoted to understanding the mechanisms by which industrial, pharmaceuticals, other chemical and physical agents impact normal cellular and organ function using a variety of genetic and biochemical techniques.

Job Duties and Responsibilities:

The primary activity of the successful candidate will be working under the supervision of Dr. Klaunig on a project titled "Investigation of the Mechanisms of Focal Liver Necrosis in Rats." The duties will include but are not limited to (1) design and conduct research using *in vivo* animal models involving animal handling, treatments, and specimen collection, (2) perform analysis utilizing histology, pathology, molecular biology, biochemistry, immunohistochemistry, and cell culture techniques, (3) collaborate with other researchers and students on other ongoing projects in the laboratory, (4) other duties may include performing routine laboratory tasks, maintaining instrumentation, implementing laboratory safety standards. In addition, the fellow also is required to develop and/or validate assays, draft report, abstract, and manuscript based on experimental results for presenting lab meetings, national and international conferences, and publish papers.

Qualifications:

Minimum requirement: a PhD degree in Toxicology or a related discipline.

Preferred qualifications: (1) previous experience in rodent handling and toxicity studies; (2) demonstrated experience in molecular biology, pathology, biochemistry, immunohistochemistry, and cell culture techniques; (3) ability to work independently and collaboratively, take initiative, and trouble-shooting ability; (4) a background in instrumental analysis such as HPLC, LC/MS is preferable.

Open until a suitable candidate is identified, with the first round of reviews anticipated to begin by 3/1/2015. This is a 12 month appointment with an anticipated start date of 6/1/2015.

Interested candidates should review the application requirements and submit their application at the Indiana University website. Questions regarding the position or application process can be directed to: James Klaunig or via postal mail at Environmental Health Search and Screen Committee, c/o James Klaunig, Professor, Department of Environmental Health, School Public Health-Bloomington, Indiana University, 1025 East 7th Street, SPH C033, Bloomington, IN 47405-4801

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