



## Society of Toxicology Specialty Section Communication *Drug Discovery Toxicology*

*Winter 2009*

### President's Message

Greetings Drug Discovery Toxicology Specialty Section members!

Its early Winter) and many of us are in full prep mode for the 2010 Annual Meeting of the SOT. Abstract submission is now closed and we are looking forward to another strong showing by our members. In a very short time DDTSS has become an extremely active specialty section and I look forward to much of the same at the upcoming annual meeting. Now is the time to register for the meeting and reserve your hotel room.

As usual we continue to use the Winter newsletter as the major source of DDTSS news and updates for the year. In this edition you will receive an update regarding DDTSS-endorsed/sponsored sessions at the upcoming annual SOT meeting in March 2010, a solicitation for volunteers to run for open positions on Council, an announcement of the Emil A. Pfitzer Drug Discovery Student Award, as well as the newly created Postdoctoral Award, and finally a message from our student representative, Arunkumar Asaithambi.

We also have two new and exciting features in this newsletter. First, there is an update on this Fall's SOT Leadership Connection webinar series. This was a series of webinars hosted by SOT and attended by specialty section officers. A wide range of topics was covered. This was a

new format for SOT. Historically, specialty section officers assembled at a face-to-face meeting during the summer to discuss topics, issues and concerns that impact specialty sections. Due to the current financial situation and its impact on SOT funds it was decided that much of the necessary business could be accomplished using a webinar format. Second, we will be introducing what we hope is a regular feature for up-coming editions of the newsletter- we will be highlighting member publications. The DDTSS at its heart is a section based on basic science research and we feel we should be emphasizing the great science that is conducted by our members. I hope members find this both informative as well as inspirational.

Finally I would like to close once again with a request. We need volunteers! Previously, Council has done most of the work regarding the student awards. Council members have sorted through the applicants, evaluated their abstracts, come to a consensus on the finalists, and been the judges for final decisions at the annual meeting. This year we need your help! As I've mentioned earlier, we will now be sponsoring a postdoc award. We can't do all of this. Please take the time to volunteer to be judge, for either the initial selection or at the annual meeting (or both!) for either the student or postdoc competition. I am sure you will find it to be a rewarding and enjoyable task. If interested please send an email to me ([john.w1.davis@pfizer.com](mailto:john.w1.davis@pfizer.com)).

As always, thanks for your continued support!

John W. Davis II  
President – DDTSS

### **DDTSS-Endorsed/Sponsored Sessions at the 2010 Annual Meeting**

In preparation for the 2010 Annual meeting to held in Baltimore more than 140 proposals were submitted in April 2009. DDTSS was asked to be the primary sponsor of seven proposals and co-endorsers of 22 proposals. DDTSS council members, Cindy Afshari, Kyle Kolaja, Craig Thomas, Mike Lawton, Melissa Rhodes, Dan Kemp, Kim Henderson, Arun Asaithambi and John Davis all provided feedback to the requestors in order to enhance the quality of the submissions. Their service the Specialty Section is gratefully acknowledged. Of those that were submitted in which DDTSS was the primary sponsor three were accepted and an additional 13 endorsed proposals were also accepted.

#### Sponsor

- Toxicology in the 21<sup>st</sup> Century: Stem Cells in Drug Discovery and Development – Workshop
- Bile Salt Transport and Liver Injury – Symposium
- Metabolic Syndrome and Increased Sensitivity to Drug-Induced Liver Injury (DILI): Non-Clinical Models and Clinical Implications – Symposium

#### Endorsement

- Genotoxic Impurities in Drugs and Drug Products: What is the Right Way to Deal With It in R&D Vs Regulatory Guidance? – Symposium
- Genetics: The Link Between Exposures, Gene X Environment Interaction, and Toxicity – Symposium
- The Ying and Yang of Immunomodulatory Biopharmaceuticals: What Have We Learned Since MABEL

and How Close Are We to the Clinical Dose? – Roundtable

- Mechanistic Role of Reactive Intermediate Protein Covalent Binding in Target Organ Toxicity: Past, Present, and Future – Symposium
- Blood-Based Genomic Profiles as Biomarkers of Exposure and Effect – Workshop
- Heart Smart: Innovative Approaches for Improving Cardiovascular Safety Through Collaboration – Workshop
- Overview of Current Regulatory Expectations for Oligonucleotide-Based Therapeutics: Case-Studies For Different Classes of Onds – Roundtable
- Widely Varying Strategies Implemented in Discovery to Reduce the Failure Rate of Clinical Lead Candidates in Development – Workshop
- Novel Research Approaches, Animal Models, and Clinical Examples in Translational Toxicology – Workshop
- Opportunities to Modify Current Regulatory Testing Guidelines and Advance the Assessment of Pharmaceutical Carcinogenicity Risk in the 21st Century – Workshop
- Mitochondrial Toxicity in Disease and Death – Symposium
- Minerals and Metals: Pros and Cons of Deliberate Exposure – Workshop
- High-Throughput Electrophysiology - 21st Century Toxicity Testing Approaches With Functional Outcomes – Workshop

### **Call for Nominations**

Incredibly it's already time to once again solicit nominations for open officer positions for 2010-2011. The following two positions are open: VP-elect and Councilor.

Councilor is a two-year term, while the VP-elect position is a four-year commitment that transitions to VP, President and finally Past-President. For more information on the duties and expectations for these positions please review the by-laws posted on our website

(<http://www.toxicology.org/ISOT/SS/DDTSS/Ind ex.asp#bylaws>).

If you are interested or would like to nominate someone please contact John Davis ([john.w1.davis@pfizer.com](mailto:john.w1.davis@pfizer.com)).

### Officers Listing

2009-2010	2010-2011
<b>President</b> John W. Davis II Pfizer <a href="mailto:John.w1.davis@pfizer.com">John.w1.davis@pfizer.com</a>	<b>President</b> Cynthia Afshari Amgen
<b>Vice President</b> Cynthia Afshari Amgen <a href="mailto:cafshari@amgen.com">cafshari@amgen.com</a>	<b>Vice President</b> Craig Thomas Eli Lilly and Co.
<b>Vice President-elect</b> Craig Thomas Eli Lilly and Co. <a href="mailto:Thomas.craig_E@lilly.com">Thomas.craig_E@lilly.com</a>	<b>Vice President-elect</b> Open
<b>Secretary/Treasurer</b> Melissa Rhodes GlaxoSmithKline <a href="mailto:melissa.c.rhodes@gsk.com">melissa.c.rhodes@gsk.com</a>	<b>Secretary/Treasurer</b> Melissa Rhodes GlaxoSmithKline
<b>Counselor (Past President)</b> Kyle Kolaja Roche Palo Alto <a href="mailto:kyle.kolaja@roche.com">kyle.kolaja@roche.com</a>	<b>Counselor (Past President)</b> John W. Davis II Pfizer
<b>Counselor</b> Dan Kemp GlaxoSmithKline <a href="mailto:daniel.c.kemp@gsk.com">daniel.c.kemp@gsk.com</a>	<b>Counselor</b> Dan Kemp GlaxoSmithKline
<b>Counselor</b> Michael Lawton Pfizer <a href="mailto:michael.lawton@pfizer.com">michael.lawton@pfizer.com</a>	<b>Counselor</b> Open
<b>Postdoctoral Representative</b> Kim Henderson UCLA <a href="mailto:hndkim@ucla.edu">hndkim@ucla.edu</a>	<b>Postdoctoral Representative</b> Kim Henderson UCLA
<b>Student Representative and Web Liaison</b> Arunkumar Asaithambi Iowa State University <a href="mailto:akarun@iastate.edu">akarun@iastate.edu</a>	<b>Student Representative and Web Liaison</b> Open (to be filled by appointment from student poster finalists).

### DDTSS 2010 SOT Reception

The DDTSS reception will take place Monday, March 8, 2010. Please refer to the final meeting agenda for exact time and location.

### Student Poster Competition 2010 Annual Meeting - Call for Submissions

This competition is open to current graduate students whose abstracts have been accepted by SOT for presentation at the 2010 Annual Meeting. Applicants must submit a copy of the abstract and a letter of support from their dissertation advisor. A selected set of applicants will be invited to present their posters during a special poster judging session distinct from the regularly scheduled poster sessions. Student winners may be eligible to participate in 2010–2011 DDTSS as the Student Representative. To participate in the DDTSS Student Award competition, membership in SOT and/or DDTSS is encouraged but not necessary. First (\$1000), second (\$600) and third (\$300) place prizes will be presented at the 2010 Annual Meeting. (Made possible by the Emil Pfitzer Drug Discovery Toxicology Fund.) Please submit applications and letters of recommendation by e-mail to Melissa Rhodes ([melissa.c.rhodes@gsk.com](mailto:melissa.c.rhodes@gsk.com)). Please name the abstract/narrative file with the student's or postdoc's surname\_DDTSS and put "DDTSS student award" or "DDTSS postdoc award" in the subject line of the e-mail.

### Postdoctoral Poster Competition 2010 Annual Meeting - Call for Submissions

This newly established award was made possible by the Emil Pfitzer Drug Discovery Toxicology Fund. Applicants must have completed a Ph.D. and have an abstract accepted by SOT for presentation at the 2010 Annual Meeting. Applicants must submit a copy of the abstract and a letter of support from their postdoctoral advisor. A selected set of applicants will be invited to present their posters during a special poster judging session distinct from the regularly scheduled poster sessions. To participate in the DDTSS Postdoctoral Award competition, membership in SOT and/or DDTSS is encouraged but not necessary. First (\$1000), second (\$600) and third (\$300) place prizes will be presented at the 2010 Annual Meeting. Please submit applications and letters of recommendation by e-mail to Melissa Rhodes ([melissa.c.rhodes@gsk.com](mailto:melissa.c.rhodes@gsk.com)). Please name the

abstract/narrative file with the student's or postdoc's surname\_DDTSS and put "DDTSS student award" or "DDTSS postdoc award" in the subject line of the e-mail.

## Message to Student Members

Greetings Toxicology Graduate Students!

It is a great honor for me to write this message as The Drug Discovery Toxicology Specialty Section (DDTSS) student representative and to reach out to fellow graduate students about DDTSS. The Drug Discovery Toxicology Specialty Section (DDTSS) provides a forum for promoting the understanding and advancement of new technologies and models that impact predictive toxicology. It also gives an opportunity for graduate students to interact and network with some of the best scientists from the drug discovery industry.

As a student member, my research career has been greatly impacted by the interactions I had with DDTSS officers & members and this also has helped me to prepare myself for a career in the industry after graduation. I was also impressed by the number and quality of publications by DDTSS members which gives insight about the cutting edge technologies and new emerging research areas.

At the SOT Annual Meeting, the DDTSS sponsors symposia, workshops, and section meetings. Graduate student mentoring is a high priority of the DDTSS and its members. Membership in DDTSS offers a great opportunity for graduate students to make contacts with people in industry and to be on the cutting edge of emerging technologies, predictive toxicology, safety pharmacology, target validation, and safety assessment in a discovery research environment. As a member you will also have the opportunity to present your work to experienced industry professionals and compete for Emil A Pfizer award, one of the prestigious student awards in SOT. The benefits of being involved with DDTSS are not limited to students thinking about industry careers!

Thank You,

Arunkumar Asaithambi

DDTSS Student Representative

## SOT Leadership Connection WebEx Meetings

This Fall the leadership of the Society leveraged e- technology to enable interactive dialogue with officers of SOT and various Specialty Sections, Regional Chapters and Special Interest groups. A series of WebEx conferences was held to share the vision for SOT, to provide timely logistical information that is critical for officers to ably serve in their roles and to solicit feedback for consideration by the leadership of SOT. The meetings were quite detailed (generally > 100 slides were shared) and led by many SOT leaders and staff members. This format not only opened up the opportunity for many members in leadership positions within the sub-groups mentioned above to participate, but was also a very cost and time effective means of outreach, which is critical given the budgetary challenges pharma, academia and government all face in today's economic climate.

The topics covered in the WebEx conferences are listed below. If you want more information, the slides are available on the SOT website (<https://www.toxicology.org/isot/lrg/LeadershipConnect.asp>), or we can provide them to you upon request.

1. Leadership Resources
  - Overview of the SOT Leadership Reference Guide (LRG)
  - Official Documents
  - Officer Activities through the LRG
  - Policies and Procedures
  - Student and Postdoctoral Representatives
  - SOT 50th Anniversary
2. Financials and Funding
  - NIH Special Emphasis Panel: SIEE
  - SOT Award Nominations
  - Endowment Fund
  - RC, SIG, SS Awards, Financial Statements and Policies
  - Regional Chapter and Teleseminar Funding

3. Annual Meeting Sessions, Events, and Awards
  - Annual meeting RC, SIG, SS and Ancillary Events
  - Annual Meeting Sessions
  - Process for soliciting, preparing, reviewing and accepting proposals
  - Continuing Education
4. Component Groups – Specialty Sections, Regional Chapters, Special Interest Groups
  - Two New Specialty Sections
  - Collaboration with Communications Committee
  - Strategic Objectives and Mechanisms for Achieving Objectives
  - New Specialty Section Growth and Membership
  - By-Laws Update
  - Governance Group

While there is a plethora of data, facts and objectives that were discussed in these meetings, it is most important for our members to focus on the SOT Strategic Priorities:

- Increase Scientific Impact
- Advocate the Value of Toxicology
- Build for the Future of Toxicology
- Expand and Deepen Member Engagement
- Strengthen Organizational Effectiveness

Elsewhere in this newsletter is information regarding the nomination process for current open leadership positions within the DDTSS. Your engagement and willingness to serve are what will enable SOT to realize its Strategic Priorities.

In the WebEx meetings we were also reminded that the 2011 SOT annual meeting will be an anniversary celebration of the 50th year of the Society. Accordingly, there will be many special events, a special logo, etc. that will promote this milestone in the life of SOT. Start your 2011 meeting planning today!

## DDTSS Noteworthy Publications

There were over 100 scientific papers published to date in 2009 by DDTSS members that demonstrate outstanding scholarship and dedication. Given the diversity of our Section membership, the breadth of the publications is impressive. In reviewing the overall publications list, examples of categories that a number of the publications fall under are: 1) In vitro or in silico screens to predict in vivo toxicities, 2) Strategies for drug safety assessment and development, 3) Immunotoxicology or the role of the immune system in target organ toxicity, and 4) Gene expression in the study of cell injury or protection. We have highlighted just a few student and full member publications below (note: not chosen on the basis of a merit review; simply a representative cross-section for illustrative purposes). For a complete list of all 2009 publications by our members please go to our website. Thank you for representing the DDTSS and promoting the scientific acumen of this group via your impressive publication list. We look forward to even more 'exciting science' in 2010!!!

Representative Publications	Student	Member
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<p><b>Jaimie Bernard Ph.D.</b>, University of Rochester, NY; Bernard, J J ; Seweryniak, K E ; Koniski, A D ; Spinelli, S L ; Blumberg, N ; Francis, C W ; Taubman, M B ; Palis, J ; Phipps, R P. <i>Foxp3 Regulates Megakaryopoiesis and Platelet Function</i>. Arterioscler Thromb Vasc Biol. 2009 Aug 6.</p>	<p><b>Peter Bui Ph.D.</b>, University of California, Los Angeles, CA; Bui, P H ; Hsu, E L ; Hankinson, O. <i>Fatty Acid Hydroperoxides Support CYP2S1-Mediated Bioactivation of Benzo[a]pyrene7,8-dihydrodiol</i>. Mol Pharmacol. 2009 Aug 27.</p>	<p><b>Bui, P H ; Hankinson, O.</b> <i>Functional characterization of human cytochrome P450 2S1 using a synthetic gene-expression protein in E.coli</i>. Mol Pharmacol. 2009 Aug 27.</p>
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**Haitan Lu**, Michigan State University, East Lansing, MI; Lu, Haitian; Kaplan, Barbara L F; Ngaoteprutaram, Thitirat; Kaminski, Norbert E. *Suppression of T cell costimulator ICOS by Delta9-tetrahydrocannabinol*. J Leukoc Biol. 2009 Feb;85(2):322-9. Epub 2008 Nov 6.

**Kimberly Henderson Ph.D.**, University of California, Los Angeles, CA; Henderson, Kimberly; Stella, Salvatore L; Kobylewski, Sarah; Eckhart, Curtis D. *Receptor activated Ca(2+) release is inhibited by boric acid in prostate cancer cells*. PLoS One. 2009 Jun 23;4(6):e6009.

**Jeffrey Vassallo Ph.D.**, Lehigh University, Bethlehem, PA; Vassallo, Jeffrey D; Janovitz, Evan B; Wescott, Debra M; Chadwick, Chris; Lowe-Krentz, Linda J; Lehman-McKeeman, Lois D. *Biomarkers of drug-induced skeletal muscle injury in the rat: troponin I and myoglobin*. Toxicol Sci. 2009 Oct;111(2):402-12. Epub 2009 Jul 23.

**Aya Westbrook**, University of California, Los Angeles, CA; Westbrook AM, Wei B, Braun J, Schiestl RH. *Intestinal mucosal inflammation leads to systemic genotoxicity in mice*. Cancer Research 2009 Jun 1;69(11):4827-34.

#### Representative Full Member Publications

**Olaharski, Andrew J**; Uppal, Hirdesh; Cooper, Matthew; Platz, Stefan; Zabka, Tanja S; and Kolaja, Kyle L. *In vitro to in vivo concordance of a high throughput assay of bone marrow toxicity across a diverse set of drug candidates*. Toxicol Lett. 2009 Jul 24;188(2):98-103.

**Bass, Alan S**; Cartwright, Mark E; Mahon, Craig; Morrison, Richard; Snyder, Ronald; McNamara, Paul; Bradley, Prudence; Zhou, Ying-Ying; and Hunter, John. *Exploratory drug safety: a discovery strategy to reduce attrition in development*. J Pharmacol Toxicol Methods. 2009 Jul-Aug;60(1):69-78.

**Buckley, Lorrene A**; and Dorato, Michael A. *High dose selection in general toxicity studies for drug development: A pharmaceutical industry perspective*. Regulatory Toxicol Pharmacol. 2009 Aug;54(3):301-07.

**Powley, Mark W**; Frederick, Clay B; Sistare, Frank D; and DeGeorge, Joseph J. *Safety assessment of drug metabolites: implications of regulatory guidance and potential application of genetically engineered mouse models that express human P450s*. Chem Res Toxicol. 2009 Feb;22(2):257-62.

**Bernard, J J**; Seweryniak, K E; Koniski, A D; Spinelli, S L; Blumberg, N; Francis, C W; Taubman, M B; Palis, J; and Phipps, R P. *Foxp3 Regulates Megakaryopoiesis and Platelet Function*. Arterioscler Thromb Vasc Biol. 29(11):1874-82.

**Zou, Wei**; Devi, Sachin S; Sparkenbaugh, Erica; Younis, Husam S; Roth, Robert A; and Ganey, Patricia E. *Hepatotoxic interaction of sulindac with lipopolysaccharide: role of the hemostatic system*. Toxicol Sci. 2009 Mar; 108(1):184-93.

**Tonkin, Elizabeth G**; Cooper, Matthew; Lollini, Lance O; Day-Lollini, Patricia A; Allard, John; Kolaja, Kyle L; Platz, Stefan J; and Chanda, Sushmita M. *Testicular gene expression profiling following 2-methoxyethanol and 2-ethoxyethanol exposure in male rats reveals abnormal expression of the actin binding protein cortactin in degenerating spermatocytes*. Toxicol Lett. 190(2): 193-201.

**Kwekel, Joshua C**; Forgacs, Agnes L; Burgoon, Lyle D; Williams, Kurt J; Zacharewski, Timothy R. *Tamoxifen-elicited uterotrophy: cross-species and cross-ligand analysis of the gene expression program*. BMC Med Genomics. 2009 Apr 28; 2:19.