



# Biological Modeling Specialty Section Newsletter

Volume 3, No. 1  
November, 2010



2010 – 2011  
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The BMSS Newsletter is published in February, August and November. If you have items to contribute, please send them to the editor (or Committee members) by the middle of the month preceding the planned publication date. Comments and suggestions are also welcomed.

Rob DeWoskin, Editor  
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## President's Message

Welcome to another great year for biological modeling, and to the growth of the Biological Modeling Specialty Section (BMSS). Opportunities abound in our discipline to meet the challenges in implementing the NRC recommendations for "Toxicity Testing in the 21st Century." Research programs are underway around the world that will dramatically transform the practice of risk assessment, and biological modeling is expected to play a key role in integrating and interpreting data for relevance *in vivo*. Keeping up with the rapid pace of new developments, and the volumes of new data, however, have prompted many of us to seek ever more efficient communications, collaborations, and collective development of needed information resources. SOT developed ToXchange to assist us in these endeavors.

I encourage you to log-in to ToXchange, and explore the resources that are now available to BMSS members. This newsletter will introduce some of these, including ToXchange online "polling". We will "pilot test" polling to see if it truly does provide an efficient means for you to voice your opinion on important BMSS activities including which is the best paper of the year, and what activities would you like at our annual reception. In the coming months, we will also explore use of the onsite Wiki and discussion forums to advance long standing BMSS goals such as improved access to, or collective development of, information resources that support model development.

Will this new digital forum help us improve our productivity, or be yet another layer of "to do" in our already overloaded to do list? The trends point to the former, and I'm interested in giving ToXchange a try. I hope you will be too!

*Rob DeWoskin*  
*President of BMSS*

## ToXchange Poll Now Open to Choose Activities for our BMSS Reception

*Rob DeWoskin, President*

Did you like the 2010 BMSS annual reception in Salt Lake City? We heard a terrific talk by Dr. Chris Johnson, Director of the Scientific Computing and Imaging at the University of Utah. The food was good, and we had time to catch up on news from colleagues we only seem to see at SOT. But maybe you would like something other than a talk? **Log-in to ToXchange, where you can now enter your vote (and see the poll results) on a number of different reception activity choices.** We'll post the final ToXchange poll results and reception agenda in the February BMSS newsletter. Core activities including the initial socializing, awards, and student/post doc "night out" with the officers will continue. What the main event will be, however, is now up to you. This year's BMSS reception in Washington DC is currently scheduled for Wednesday, March 9, 6:00 pm – 7:30 pm.

## BMSS Officer or Student Representative in 2010

*Jim Bruckner, Vice President*

*Hisham El-Masri, Vice President Elect*

Serve on the BMSS council in 2011 and help guide the BMSS, as well as participate in many other SOT initiatives to improve communications and collaborations among different SOT groups! In 2011, we will elect three new BMSS council members: 1) a Vice-President Elect (currently held by Hisham El-Masri, who will become BMSS Vice-President in 2011); 2) a new councilor to replace Michael J. Bartels, and 3) a new councilor to replace Jeffry Schroeter. We extend our many thanks to Jeff and Mike for their active participations in the council over the past two years! **Be on the 2011 election ballot...you might win!!! Send your name and a brief one paragraph biosketch (or**

**the name of someone who you think would make a great BMSS council member) to Hisham El-Masri at [el-masri.hisham@epa.gov](mailto:el-masri.hisham@epa.gov) or to Jim Bruckner at [bruckner@rx.uga.edu](mailto:bruckner@rx.uga.edu) by December 15!!** SOT will send the ballot in early January, and we will announce the winners in the February newsletter.

For further information about the roles and responsibilities of each position, go to the [BMSS charter](#) available at the SOT/BMSS web site or feel free to contact any of the current council members.

## 2011 Perry J. Gehring Student Award for Excellence in Biological Modeling

*Hisham El-Masri, Vice President Elect*

If you are currently a student or post-doc consider applying for the 2011 Perry J. Gehring Student Award for Excellence in Biological Modeling. In 2010, there were two awardees: 1) Sheppard A. Martin for his work titled "Progress in Development of a Physiologically-based Pharmacokinetic Model for Aviation Fuels"; and 2) Marc-André Verner for his work titled "Unveiling Associations Between Lactational Exposure to Polychlorinated Biphenyls (PCBs) and Infant Neurological Development: Use of PBPK Modeling vs Traditional Exposure Metrics". Aside from the cash, software, and plaque received by the awardees, the award looks great on your CV!!

Here is the process: Each candidate, whose abstract has been accepted for presentation at the 2011 Annual Meeting, submits the following: 1) a copy of the abstract; (2) a letter (2 pages maximum) discussing the significance and potential impact of the work on toxicology and biological modeling; and (3) a letter of support from their primary advisor. The application should be submitted as a single PDF file

containing all supporting documents. To participate in the BMSS Student Award competition, membership in SOT and/or BMSS is NOT necessary.

Research areas of interest include (but are not limited to) subcellular, cellular, tissue, organ or whole-body models of complex biological systems; PK or PD models; biological insights gained through model development and experimental evaluation; statistical or quantitative computational approaches to predict toxicity or to estimate parameters for dose-response models. **The deadline for submission of applications is January 5, 2011.** Send completed applications (or questions) to Hisham El-Masri at: [el-masri.hisham@epa.gov](mailto:el-masri.hisham@epa.gov).

### **BMSS Best Paper in 2010 Award!!**

*Rob DeWoskin and Jeanne Domoradzki*

The process of choosing the best biological modeling paper published in a peer reviewed journal in 2010 is challenging for busy council members. Yet, this is an important task for our specialty section to both recognize outstanding researchers, and to help our profession develop standards for future work. This year, we will take advantage of the ToXchange forum, and test pilot a new approach for identifying and selecting the best paper. If you have an article you like related to biological modeling, please submit your citation choices to Jeanne Domoradzki at: [jean.domoradzki@dowcorning.com](mailto:jean.domoradzki@dowcorning.com) or to Rob DeWoskin at: [dewoskin.rob@epa.gov](mailto:dewoskin.rob@epa.gov).

All submitted abstracts (and pdfs if possible) will be posted on the site, and the citations listed on a poll on ToXchange that will allow the full BMSS membership to vote on

which paper they think is best. **The poll will appear on the BMSS ToXchange site the first week of January**, and we will announce the winner in the BMSS February newsletter and at the annual reception. **Enter your article or a colleague's article today!!! And be sure to visit the BMSS ToXchange site in early January to vote.**

### **BMSS Sponsored and Endorsed Sessions at the 2011 SOT Annual Meeting**

*Christopher Carosino*

*Student Representative*

This year's 50th Anniversary Annual Meeting is sure to bring together a great collective of experts from a diverse variety of fields. March 6-10 will be five days packed with exciting scientific discoveries shared in the form of workshops, symposiums and poster presentations. This year, the Biological Modeling Specialty Section has selected to sponsor one workshop and endorse four workshops, two symposiums and one continuing education course. We hope the selected sessions listed below will prove to be quite interesting to our members, so don't forget them when it comes time to schedule out your meeting plans!

Sponsored:

- PBPK Model Use in Risk Assessment: Why Being Published is Not Enough (Workshop)

Endorsed:

- Best Practices for Developing, Characterizing and Applying Physiologically Based Pharmacokinetic Models in Risk Assessment. (CE Course)
- Using Mode of Action Data to Guide Quantitative Cancer Risk Assessment: A Case Study of Hexavalent Chromium in Drinking Water (Workshop)

- Understanding Structural and Physical Drivers of Drug Toxicity: Utility and Translatable Value (Workshop)
- Approaches for Incorporating Non-Chemical Stressors into Cumulative Risk Assessments (Workshop)
- Vascular Developmental Toxicity: Identification, Prioritization and Application (Symposium)
- The Use of Epidemiological Data and PBPK Modeling in a Risk Assessment for Manganese that Considers its Essentiality (Symposium)

### **SOT Council Supports Profit Sharing for Contemporary Concepts in Toxicology (CCT) Meetings**

*News from the SOT council*

The SOT Council has always supported Contemporary Concepts in Toxicology (CCT) Meetings, and will now allow RCs/SIGs/SSs to share 50/50 the profits generated from CCT meeting. The goal is to encourage more RCs/SIGs/SSs to propose CCTs, and to provide ways the groups can generate income for their activities such as awards, student travel, and special projects. The profit sharing will occur after the initial seed funds provided by the Society are repaid (\$25,000). Profits will be shared with the understanding that the funds will go to the respective Component Group(s) and will flow into their general operating funds. If multiple RCs/SIGs/SSs are involved in the meeting coordination, they will divide the available funds evenly among the Groups. Any CCTs proposed by Organizations not affiliated with an SOT RC/SIG/SS would not have the option in sharing in the profits.

The Society will continue to review proposals and to underwrite all the liabilities of the CCT meeting only with the

expectation that the meeting at least break even financially.

To learn more about CCT meetings and the proposal process, please visit:  
[https://www.toxicology.org/ai/meet/CCT\\_Guidelines.asp](https://www.toxicology.org/ai/meet/CCT_Guidelines.asp)

### **Contribute to the Perry J. Gehring Biological Modeling Student Award Fund**

*News from the Endowment Fund Board*

The Perry J. Gehring Biological Modeling Student Award Fund is a “net asset restricted” endowment fund, which means that the net asset base can not be spent, only a percentage of the base is available each year to support and recognize students. In 2010-2011, SOT’s Endowment Fund Board has authorized use of up to 4% (\$1,312) of the net assets (\$32,789). The good news is that BMSS members (or indeed anyone) can make tax deductible contributions to the Perry J. Gehring Biological Modeling Student Award Fund to increase its net asset base, and thus the amount of money available each year for student awards and support. As you review your tax deductible charitable contributions, please consider donating to this very worthwhile fund and to the future of our biological modeling students and post-docs.

### **The BMSS 2010 Numbers Corner** (as of October 2010)

Number of Active Members: 140

Operating Funds: \$11,566 (a 5% increase over the previous year).

Perry J. Gehring Endowment Net Assets = \$32,789; Total Funds Available for 2011 Awards = \$1,312