

Biological Modeling Specialty Session (BMSS)

ANNUAL REPORT: 2012-2013

May 1, 2012 to April 30, 2013

I. Officers/Committees:

| <u>Officers</u> | <u>2012-2013</u> | <u>2013-2014</u> |
|-----------------------|------------------|------------------------------|
| President: | Hisham El-Masri | Cecilia Tan |
| Vice President: | Cecilia Tan | Harvey Clewell |
| Vice President-Elect: | Harvey Clewell | Paul Hinderliter |
| Secretary/Treasurer: | Eva McLanahan | Eva McLanahan |
| Past President | James Bruckner | Hisham El-Masri |
| Councilors: | Clay Frederick | Miyoung Yoon |
| | Brad Reisfield | Brad Reisfield |
| PDA Representative: | Annie Lumen | Martin Phillips |
| GSLC Representative: | Miyuki Breen | Miyuki Breen (before 08/13) |
| | | Todd Zurlinden (after 08/13) |

Committees:

The BMSS 2012 **Best Paper Award committee** was formed by the officers from volunteers among the specialty section members and chaired by Eva McLanahan (BMSS Secretary/Treasurer).

Committee members were James Bruckner, Sudin Bhattachara, Mike Bartels, Jeff Fisher, and Paul Schlosser. Papers published either electronically or in hard copy from January to December 2012 were considered. The review process included an initial screening of hundreds of abstracts obtained by electronic searching and nominations from BMSS members followed by reading and ranking of the top four papers. The selection process was difficult due to the wide range of topics and modeling approaches considered.

II. Activities:

2013 SOT Annual Meeting Reception was held in San Antonio on March 12, 2013.

Approximately 50 people were in attendance.

Dr. El-Masri called the meeting to order at 6:15 PM on March 12, 2013. He briefed the audience on the status of the specialty section and thanked outgoing officers and congratulated the new incoming officers. Cecilia Tan, Vice President, recognized the officers for 2013-2014 and provided her vision for the next operating year. Eva McLanahan provided the budget update and briefed the audience on the selection process for the best paper award. The honorable mentions and best paper award were then recognized. Harvey Clewell then announced Zhoumeng Lin as the recipient of 2013 Perry L. Gehring award for best presentation on biological modeling. The meeting concluded with a fun game of trivia with live musical entertainment from the Belladonna Blues Band and the Tox Pastels. Trivia winners were: 1st place – The Physios, 2nd place – Belladonna Blues Fans, and best team name – The BPA-Holes.

III. Awards:

BMSS 2013 Perry J. Gehring Student/Post-Doc Award

Zhoumeng Lin

University of Georgia

Gestational and Lactational Physiologically-based Pharmacokinetic (PBPK) Models for the Herbicide Atrazine in Rats: Development and Optimization

BMSS 2012 Best Paper Award

1st place

Corley RA, Kabilan S, Kuprat AP, Carson JP, Minard KR, Jacob RE, Timchalk C, Glenney R, Pipavath S, Cox T, Wallis CD, Larson RF, Fanucchi MV, Postlethwait EM, Einstein DR.

Comparative computational modeling of airflows and vapor dosimetry in the respiratory tracts of rat, monkey, and human. *Toxicol Sci.* (2012) 128(2):500-16.

BMSS 2012 Best Paper Honorable Mentions

Jones et al. (2012). Mechanistic pharmacokinetic modeling for the prediction of transporter-mediated disposition in humans from sandwich culture human hepatocyte data. *Drug Metab Disp* 40: 1007-1017.

Kleinstreuer et al. (2012). In vitro Perturbations of Targets in Cancer Hallmark Processes Predict Rodent Chemical Carcinogenesis. *Toxicol Sci.* 131(1): 40-55.

Verner et al. (2012). Using population physiologically based pharmacokinetic modeling to determine optimal sampling times and to interpret biological exposure markers: The example of occupational exposure to styrene. *Toxicol Lett* 213: 299-304.

IV. 2012 SOT Annual Meeting Courses/Sessions:

After reviewing proposals submitted to SOT in May 2012, the BMSS committee had voted on endorsing one advanced Continuing Education course, four workshops and six symposium sessions. Of those proposals BMSS had voted, five were selected for presentation at the 2013 Annual Meeting:

1. Modeling human genetic variability and susceptibility in the laboratory
2. Nanoinformatics: computational challenges for nanomaterial hazard assessment
3. Biology of low-dose response for DNA-reactive chemicals
4. Plunomics, the Exposome and Microbiomes in immunotoxicology
5. Are we like rodents, rabbits, or something else? Mechanisms of developmental and reproductive toxicity across species.

V. Financial Summary ending March 31, 2013

Endowment Fund:

Beginning of Year - net assets = \$33,271

End of Year - net assets = \$37,668

Operating Budget:

Beginning of Year – net assets = \$8,924 (March 31, 2012)

End of Year – net assets = \$8,764 (March 31, 2013)

VI. Contributions to SOT website:

Pictures from the BMSS reception at the 2013 Annual Meeting were posted on the BMSS website.