

Biological Modeling Specialty Section



Current BMSS Council:

President.....	Patricia Ruiz
Vice President.....	Zhoumeng Lin
Vice President-Elect.....	John Wambaugh
Secretary/Treasurer.....	Dustin Kapraun
Past President.....	Qiang Zhang
Councilor.....	Suresh Nagumalli
Councilor.....	Sudin Bhattacharya
Post-Doc Rep.....	Wei-Chun Chou
Student Rep.....	David Filipovic

Who We Are:

BMSS provides a forum for the promotion and discussion of biological computational models in toxicology and risk assessment.

BMSS was established in 1999 to support the growing need for a specialty section focused on computational and mechanism-based modeling aspects of toxicology and risk assessment. BMSS held its first reception during the 39th SOT Annual Meeting in March 2000, at the Philadelphia Convention Center, in the city of Philadelphia, Pennsylvania.



To become a BMSS member:

1. SOT membership is required
2. Apply online for BMSS membership when renewing your SOT membership

2023 AWARDS

2023 Perry J. Gehring Award (2 awardees)

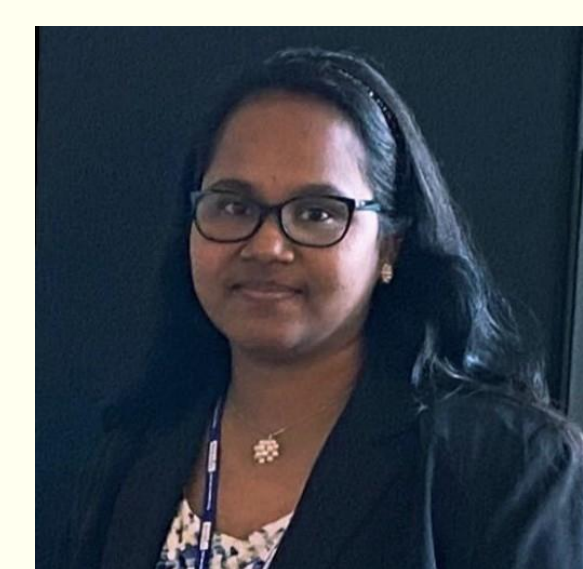


Xue Wu

PhD Student at *University of Florida*

Poster #4325 (P190), author will attend on Wednesday, March 22, 09:00am - 10:45pm
Development of a Physiologically Based Pharmacokinetic PBPK Model for Flunixin in Cattle and Swine following Dermal Exposure.

Pavani Gonnabathula



Postdoctoral Research Fellow at US *FDA/NCTR*

Poster #4324 (P189), author will attend on Wednesday, March 22, 09:00am - 10:45pm
Development and Application of a Paxlovid PBPK Model for Modeling-Based Dose Recommendations in the Pediatric Population

2023 Best Trainee Abstract Award

(in honor of Charles Eric Hack)

Susana Proença



Postdoc at *Wageningen University and Research, Netherlands*

Poster #4131 (P629), author will attend on Tuesday, March 21, 02:30pm - 04:15pm
A Mechanistic and Probabilistic PBPK Model for Amiodarone for Quantitative In Vitro to In Vivo Extrapolation.

2023 Andersen-Clewell Trainee Award

(shared with the Risk Assessment Specialty Section Fund)

Elise Hickman



Postdoctoral Research Fellow at *University of North Carolina at Chapel Hill*

Poster #3830 (P320), author will attend on Tuesday, March 21, 02:30pm - 04:15pm
Interindividual Variability Assessments through Benchmark Dose-Response Modeling of Primary Human Bronchial Epithelial-Fibroblast Co-culture Responses to Acrolein

2023 Biological Modeling Best Paper Award



Kapraun, D. F.; Zurlinden, T. J.; Verner, M. A.; Chiang, C.;
Dzierlenga, M. W.; Carlson, L. M.; Schlosser, P. M.; Lehmann, G. M.

Tox. Sci. 2022; 189(2); pp. 155-174. doi: 10.1093/toxsci/kfac084.

A Generic Pharmacokinetic Model for Quantifying Mother-to-Offspring Transfer of Lipophilic Persistent Environmental Chemicals.

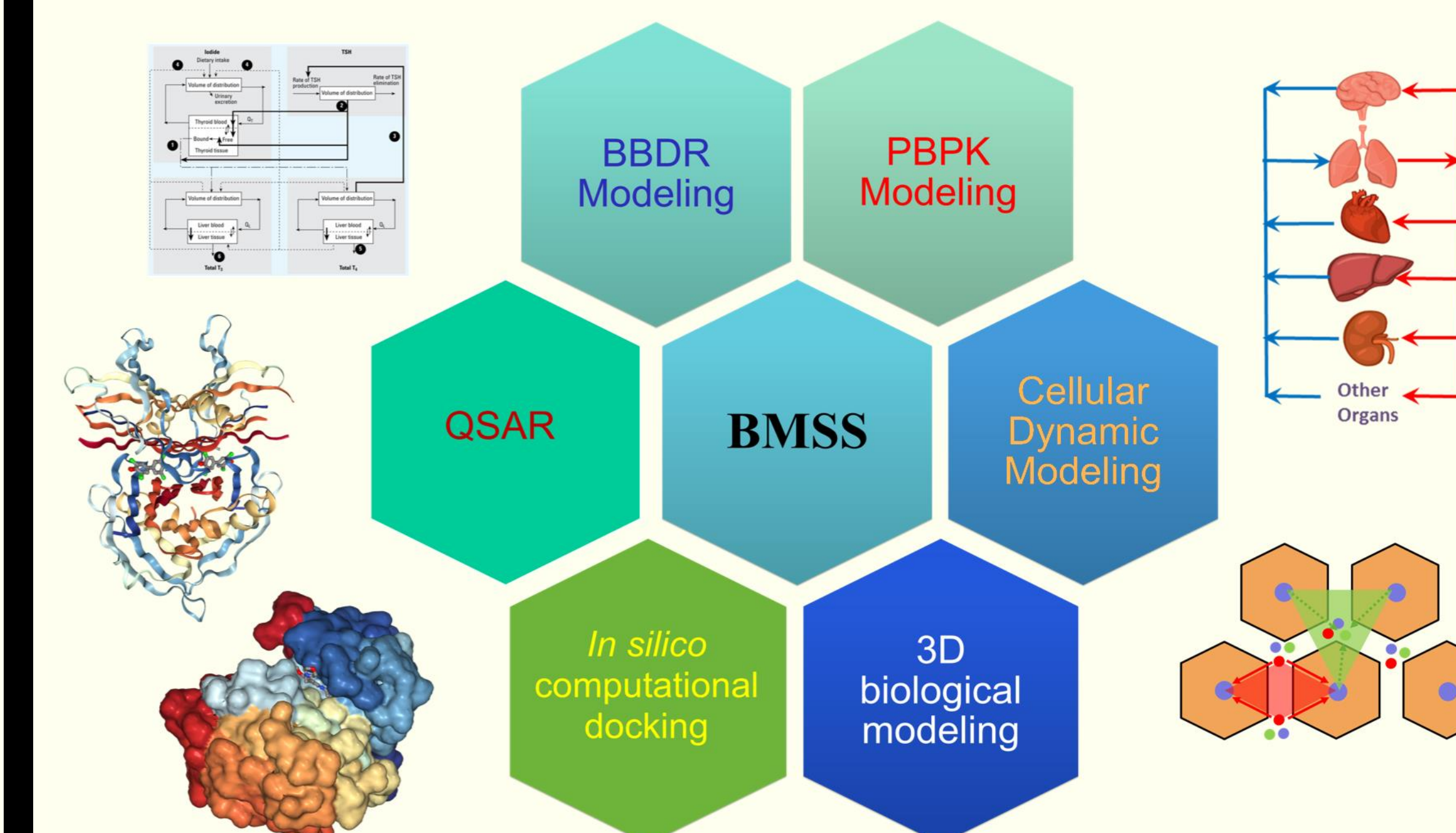
Honorable Mention (2 articles)

- Kapraun, D. F., Sfeir, M., Pearce, R. G., Davidson-Fritz, S. E., Lumen, A., Dallmann, A., ... Wambaugh, J. F. (2022). Evaluation of a rapid, generic human gestational dose model. *Reproductive Toxicology*, 113, 172–188.
- Borba, J. V. B., Alves, V. M., Braga, R. C., Korn, D. R., Overdahl, K., Silva, A. C., ... Others. (2022). STopTox: An in silico alternative to animal testing for acute systemic and topical toxicity. *Environmental Health Perspectives*, 130(2), 027012.

Biological Models in Toxicology:

Quantitative descriptions of physiological processes and/or xenobiotic fate within an organism, including internal dose estimates as well as molecular mechanisms leading to changes in toxicokinetics and toxicodynamic responses of one or more xenobiotics.

Biological models help to bridge the gap between observed chemical effects in laboratory experiments and those observed at the population level, thereby allowing more accurate predictions of effects and better risk assessments related to the environmental/occupational exposure of drugs and contaminants.



PDB: 2ITY (Yu et al. 2007); 2G5U (Palaninathan et al. 2006); McLanahan et al. 2009

MEET US!

At the BMSS Reception

Meet with other BMSS members and award winners!
Tuesday, March 21 2023 at **6:00-7:30pm**, at Broadway Ballroom A, Omni Nashville Hotel.

Please visit our **website**:

<https://www.toxicology.org/groups/ss/bmss/>

Please join us on **LinkedIn**:

<https://www.linkedin.com/in/sotbmss/>

Please follow us on **Twitter**:

<https://twitter.com/sotbmss>

For questions, please send an email to sotbmss@gmail.com