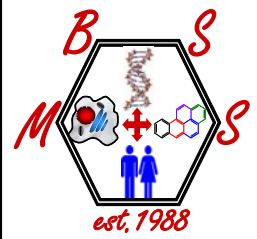


MOLECULAR BIOLOGY SPECIALTY SECTION NEWSLETTER

AUTUMN - 2010



*****2010-2011 MBSS Executive Board*****

President	Christopher Reilly	Univ. of Utah
Vice President	Russell Thomas	Hamner Inst. Health Sci.
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Post-Doc. Rep.	Cassandra Deering-Rice	Univ. of Utah
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From the MBSS President

I enjoyed seeing many of you at the 2010 Annual SOT Meeting in Salt Lake City. I was pleased with the strong attendance at the reception and business meeting held on Monday March 8th and am particularly pleased by the number of people who remained throughout the student and post-doc. award presentations. These awards are highly competitive and a great honor for the recipients as well as a testament to the dedication of our membership who provided significant funding to the MBSS endowment that supported the majority of the awards this past year. At the 2010 meeting MBSS continued its tradition of strong meeting attendance and member-chaired sessions. Details of the MBSS contributions for 2010 and those that will occur in 2011 are provided below. This year, all Specialty Sections are being asked to play a larger role in the Annual Meetings and the business of the SOT regarding communication, web page content, annual meeting planning, etc. For the 50th Anniversary 2011 meeting Specialty Sections are also being asked to contribute by providing a token and brief description of an item or technique that is representative of each group to be placed in a time capsule which will be stored and opened at a future SOT meeting. As always, if you have suggestions for improving our specialty section, its website, or operating procedures, please contact me or any of the officers throughout the year.

Our membership has leveled after rising over the past few years. While we would like to see a continual increase in membership, we realize that difficult financial times and the availability of new specialty sections may slow growth and spread potential and existing members out into new groups. We are grateful to our long-time members, their contributions, and continued support for the MBSS and ask them to continue to support MBSS and provide feedback on how we can build for the future.

Key Dates and Reminders

- **October 3, 2010**
SOT 2010 on-line abstract submission closes (March 6-10, 2011, Washington, DC)
- **November 15, 2010**
Deadline for submission of applications for MBSS Student and Postdoctoral awards (Nancy Denslow: ndenslow@ufl.edu)
- **December 1, 2010**
Deadline for submission of nominations for MBSS Officer Elections
- **Fall 2010**
SOT Membership Renewal - **Be sure to renew your membership in MBSS and remind your grad students and post-docs to become members of MBSS!**

Of note, it is very satisfying to see an increase in the number of student members and their direct involvement in MBSS activities as officers and session co-chairs. It is also great to see that applications for MBSS awards have steadily increased over the past few years, increasing the significance of these awards through competition. Obviously, it is very important for all lab PIs to inform students and post-docs about the MBSS opportunities and to apply for awards and officer positions. The opportunities offered by MBSS are excellent ways to enhance career development and to become involved in SOT!

In 2007, we established the MBSS Endowment Fund and we achieved our initial goal of \$25,000 by the 2009 annual meeting making it a Permanently Restricted Net Asset Fund to support student and postdoctoral awards for all future SOT meetings, as exemplified in 2010. Thank you to all who have contributed so generously. For those who have not yet done so, please consider donating to support the MBSS and its graduate student and postdoctoral award programs. Of note, this fund has grown to approximately \$30,300 (June 30, 2010) despite less-than-stellar investment returns and from new donations from MBSS members. This year we have approximately \$1,200 available for awards making it possible to support 100% of the awards for 2011! I look forward to continuing the momentum of the MBSS and strengthening its membership, financial standing, and contributions to the SOT as a whole. Please contact me with any concerns, suggestions, comments, etc.

Sincerely,
Chris Reilly

2010 Annual Meeting Summary

The MBSS was the primary sponsor of 4 scientific sessions and 3 CE courses at the 2010 Annual Meeting, as well as a secondary or tertiary sponsor of many more. Many thanks to the chairs, co-chairs and speakers in these sessions, the quality of the SOT meeting is highly dependent on your contributions. We all know it is a great deal of work to pull together innovative and well-organized proposals in the short time between the end of the annual meeting and the submission deadline, but please be aware that the MBSS officers are there to provide suggests and assist you with the development and sponsorship of the proposals. We especially want to remind you that coordinating your submission early with the VP elect (Chris Corton; corton.chris@epa.gov) will allow us to provide feedback on the proposal prior to submission. This practice has proven invaluable over the past few years in terms of success rates for acceptance by the Program Committee and will soon become standard procedure for all specialty sections. Students and Post-Docs are also strongly encouraged to communicate with the MBSS officers to develop any ideas they may have.

Here is a list of the scientific sessions that were contributed by MBSS members:

- "Faster Science For Better Decisions: Characterizing Environmental Contaminant Risk From High Throughput Data" Chairs: Drs. David Dix (EPA) and Russell Thomas (Hamner Institutes for Health Sciences)
- "It's not Your Father's Aryl-Hydrocarbon Receptor: New Biological Roles for a Misunderstood Receptor" Chairs: Drs. Russell Thomas (Hamner Institutes for Health Sciences) and J. Craig Rowlands (The Dow Chemical Company)
- "OMICs Profiling of Cell and Tissue Interactions of Nanomaterials: Insight into Mechanisms of Action" Chairs: Drs. Mary-Jane Cunningham (Nanomics Biosciences, Inc.) and Frank Witzmann (Indiana University School of Medicine)
- "Blood-based Genomic Profiles as Biomarkers of Exposure and Effect" Chairs: Drs. Russell Thomas (Hamner Institutes for Health Sciences) and Richard S. Paules (NIEHS)

Here is a list of the CE Courses that were contributed by MBSS members:

- "Biological Pathway Analysis: An Introduction to The Pathway Knowledgebases For Toxicological Research" Chair: Dr. Marc Gillespie (St. John's University)
- "Predictive Power of Novel Technologies (Cells to 'Omics'): Promises, Pitfalls and Potential Applications" Chairs: Drs. Srikanth Nadadur (NIEHS) and Mary-Jane Cunningham (Nanomics Biosciences, Inc.), .

- “Nuclear receptors: role in chemical mode of action and targets for toxicity testing” Chairs: Drs. Chris Corton (US-EPA) and Jack Vanden Heuvel (Pennsylvania State University)

A highlight of the past year was the MBSS mixer/reception held on Monday March 8th during the annual meeting. After a brief presentation of the business meeting topics and plans for the upcoming year, the student and post-doc. awards were presented. As always, these brief presentations were excellent and appreciated by the audience. The awards recipients were:

Graduate Student Awards (all supported by endowment funds):

1st place presentation (\$250) – Jill A. Franzosa, Oregon State University “Developmental Regulation of Retinoic Acid Signaling: Teratogenic Role of microRNAs”

2nd place presentation (\$150) – Raymond Lo, University of Toronto “Genomic Analysis of Dioxin-Dependent Recruitment of AHR to Promoter Regions in Mouse Liver”

3rd place presentation (\$100) - Lauren Mordasky Markell, Pennsylvania State University “Pharmacological Inhibition of TGF β signaling Enhances Malignancy Progression of Chemically-Induced Skin Cancers through Changes in Inflammatory Responses”

Post Doctoral Awards (supported 50% by endowment funds + 50% general funds):

1st place presentation (\$200) – Melissa A. Barhoover PhD., Hamner Institute for Health Sciences “The AHR Regulates Cell Cycle Progression in Human Breast Cancer Cells via a Functional Interaction with CDK4”

2nd place presentation (\$200) – Tamara L. Tal, PhD., Oregon State University “ The Developmental Neurotoxicity of microRNAs: Nicotine-Induced Defects in Motor Neuron Axon Guidance and Behavior”

3rd place presentation (\$200) - Pei-Li Yao, Ph.D., University of Texas at Austin “ MEHP-Induced Disruption of Junctional Complexes in Seminiferous Epithelium of the Rodent Testis is Mediated by MMP-2”

2011 Election of MBSS Officers

The MBSS election is held prior to the Annual Meeting. This year we will need to elect a new Vice President elect (total of 4 year commitment, VP-elect, VP, President, Past President), a Secretary/Treasurer (2 year commitment), a Jr. Councilor (2 year commitment), an Jr. Student Rep. (2 year commitment), and a post-doc. rep (1 year commitment). If you are interested in running for an officer position or would like to nominate someone please contact Russell Thomas (RThomas@thehamner.org) who will be coordinating the election this year. Anyone interested in running for office will need to submit a brief bio by December 1, 2010. MBSS now elects a student and post-doctoral representatives through the annual ballot. This is a great opportunity for students and post-docs. The student representative serves a two-year term on the SOT Student Advisory Council (SAC), allowing for the MBSS to be represented by a senior SACrep and a junior SACrep. The SACrep are able to run for office within the SAC and serve on its executive board as the role of SAC within SOT continues to be refined. If you wish to be considered for the MBSS SAC representative (2011-2013), you must be a full-time graduate student in good standing that can fulfill the two-year commitment of the position and have interest in SOT policy and initiatives. The post-doc rep position is one year and you must be a post-doc. from ~May 2011-May 2012. Feel free to contact any of the MBSS officers with questions or visit the following website for details on officer responsibilities: <http://www.toxicology.org/ISOT/SS/molecular/MBSS.html>

2011 MBSS Student and Post-Doc Awards

The MBSS is pleased to announce the opportunity for graduate students and post-doctoral fellows to compete for research awards in molecular toxicology. Proposal submissions are due November 15th 2010 and should be submitted to Nancy Denslow at ndenslow@ufl.edu. Additional instruction and award criteria can be found online at the SOT website under Molecular Biology Specialty Section Awards: Login and visit: <http://www.toxicology.org/ai/af/awards.aspx>. Scroll down to view MBSS awards, listed in alphabetical order based on specialty section name. Alternatively, visit: <http://www.toxicology.org/ISOT/SS/molecular/MBSS.html>

- [Graduate Student Awards](#)

Applicants must be full-time students as of October 1, 2010 and research should be in the general area of molecular toxicology. Applicants should submit a copy of their abstract, along with a 2-page narrative describing their research hypothesis, background and significance (both in one PDF file). They should also arrange for a letter of recommendation to be sent by their advisor. Three awards will be made: 1st place will receive \$250, 2nd place will receive \$150, and 3rd place will receive \$100. All awardees will receive a plaque at the annual meeting of the SOT, and will present a 5-minute synopsis of their research at the MBSS meeting using a maximum of three slides. The submission deadline is November 15th 2010.

- [Post-Doctoral Fellow Research Award](#)

Applicants must have completed a Ph.D. and be either a student or post-doctoral member of SOT. Research should be in the general area of molecular toxicology. Applicants should submit a copy of their abstract, along with a 2-page narrative describing their research hypothesis, background and significance (both in one PDF file). They should also arrange for a letter of recommendation to be sent by their advisor. Up to three post-doctoral awards will be made, depending upon the number and quality of applications received. The value of the award will be from \$200-500. The winner will also receive a plaque at the annual meeting of the SOT and will present a 5-minute synopsis of his/her research at the MBSS meeting. The submission deadline is November 15th 2010

[Submission Information](#)

[Submission Deadline: NOV 15, 2010](#)

Please submit applications and letters electronically as PDF files to Nancy Denslow (ndenslow@ufl.edu).

****Be sure to include a header with your name on all pages****

MBSS Sponsored Sessions for 2011

The following scientific session and continuing education courses that have been accepted for presentation at the SOT 2011 meeting are:

[CE Courses \(Sunday March 6, 2011\) - http://www.toxicology.org/ai/meet/am2011/ce.asp](#)

1. **AM04 - Dealing with the Data Deluge: A Live Data Discovery and Analysis Course**
2. **AM05 - Epigenetics in Toxicology: Introduction, Mechanistic Understanding, and Applications in Safety Assessment**
3. **PM09 - Applications of Computational Systems Biology for Toxicology**
4. **PM12 - Practical How-To and Pitfalls Associated with Current Epigenetic Studies**

***Please note that AM05 is the first CE course to be developed by SOT Post-docs and that MBSS was instrumental in getting this course accepted for presentation.

[Scientific Sessions - http://www.toxicology.org/ai/meet/am2011/ss.asp](#)

1. **Human Variability In Susceptibility to Environmental toxicants**
2. **Gene-Environment Disease Interactions in Fish Models of Human Disease**
3. **Uncovering the Role of Non-Coding RNAs in Toxicology**
4. **The Spectrum of Systems Biology**

5. *Livers on a Plate: Next Generation Hepatocyte Models for High-Throughput Screening and Mode Of Action Prediction*

Other MBSS Endorsed Sessions:

1. *High Content Imaging-Applications in Toxicology and Toxicity Testing*
2. *Progress of the Tox21 Consortium in High-Throughput Bioactivity Profiling of Chemicals*
3. *Advancing Predictive Ecotoxicology Testing and Environmental Risk Assessment in the 21st Century*
4. *When Is Exposure Not Exposure? Defining the Dose-Response Region Between 'Effect' and 'Adverse Effect' Implications for Human Health Risk Assessment*
5. *Emerging Issues at the Intersection of Reproductive and Mixtures Toxicology*
6. *Mechanisms of Inflammation In Skin Carcinogenesis*

2011 CE Program Volunteer Opportunities

MBSS is sponsoring four CE courses at the 2011 annual meeting. There are 15 total courses offered and descriptions of each of the courses can be obtained at: <http://www.toxicology.org/ai/meet/am2011/ce.asp>. The CE committee is currently recruiting student volunteers to assist with the CE courses. Duties include collecting entry tickets, handing out course booklets, and other minor organizational duties. In return, the student has the opportunity to attend the course they are a volunteer for free of charge. Space is limited and requests for volunteering for specific courses will be prioritized by order of receipt. MBSS student members are encouraged to take advantage of this great opportunity. If you are interested in volunteering, please send your name, contact information, and a list of the top three courses you would like to volunteer for to Kathleen Gabrielson - kgabriel@jhmi.edu and David Rossé - davidr@toxicology.org ASAP, but no later than February 1, 2010.

Look for the next issue Spring/Fall 2011

Be sure to tell a colleague about MBSS and get your students to join.

Please support the MBSS Endowment Fund

Thank you for your continued support of MBSS