



Molecular and
Systems
Biology
Specialty
Section

News from the Molecular & Systems Biology Specialty Section

President's Message



Hello MSBSS Members

The SOT annual meeting is only a week away... and as we say here at Ole Miss "Are You Ready?!".

With this newsletter, our leadership team wanted to give you an update on all the activities of our section this past year. We've participated in some exciting new and now traditional initiatives this year. For example, on page 3, please read about our sponsorship of the CCT meeting on miRNA

biomarkers organized by Sr. Councilor, Alison Harrill. Also highlighted on page 3 are all the scientific sessions that will be presented with MSBSS sponsorship that VP Bhagavatula Moorthy ushered through the review and acceptance process. Please check out these sessions at this year's meeting.

Our support of students and postdocs continues to be one of the major aims of our specialty session, and this year was no exception. Activities available to trainees are outlined on page 6.

The 2015 MSBSS student/postdoc winners are highlighted on page 4, and this year's awardees are previewed on page 5. Come see them receive their recognition at our reception on Tuesday night.

The MSBSS Paper of the Year Award, now in its third year, will also be presented at the reception – Congrats to all our winners, and thanks to our councilors and recruited reviewers for judging the applications.

Our postdoc representative, Susie Huang, continuing in the tradition established by Jill Franzosa, has organized a, sure to be fantastic, Mentoring Luncheon to be held on Wednesday! This will be cosponsored by SOT's CRAD thanks to a successful application submitted by Susie.

I soon will transition into the Past President role but before I do I want to especially thank all the other officers of MSBSS – you all could really be counted on to help out. I want to assure the MSBSS membership that this section is being led by a great team!

Finally, I invite you all to attend the MSBSS reception Tuesday night in the Hilton Riverside Grand Salon 21 from 6-7:30. Safe Travels to New Orleans – can't wait to see you there – Kristie Willett

Officers

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Treasurer's Report

MSBSS Financials (five months ending November 2015)

	Dollar Amount
Net Assets at Beginning Period	\$ 36,860
Registration	None this quarter
Membership Dues	None this quarter
Interest	N/A this quarter
Total Income	\$0
Expenses (Sponsoring of the miRNA Workshop prior to the Annual SOT meeting)	\$6,000
Total Expenses	\$6,000
Revenue over expense	(\$6,000)
NET Assets End of Period	\$30,860

Endowment Fund

	Dollar Amount
Net Assets Beginning of Period	\$ 39,530
Contributions	0
Interest and Dividends	\$176
Gain/Loss	(\$176)
TOTAL RETURN	\$0
No expenses this period	0
Total Expense	\$0
Revenue over expenses	\$0
Net Assets End of the Period	\$39,530

***DON'T MISS THIS GREAT OPPORTUNITY TO QUINTUPLE
YOUR MONEY!!***

MSBSS Endowment Matching Contribution Program

********See the Awards Provided by this Fund on Page 4********

Now is a great time to take advantage of SOT and MSBSS's endowment match. For every \$1 you contribute to the MSBSS endowment, MSBSS will match that dollar 3:1. SOT will also match the member's original contribution 1:1. That means for every \$1 you contribute to our endowment fund, another \$4 is added from the match! Don't pass up this tremendous opportunity to help fund our next generation of researchers, and to reward excellence in our graduate students, postdocs, and published research!!

2016 Annual Meeting Sessions Sponsored By MBSS

The MSBSS is the primary sponsor of three symposia and six workshops at the upcoming 2016 Annual Meeting, as well as a secondary or tertiary sponsor of several additional symposia, workshops and continuing education courses. We wish to thank the chairs, co-chairs and speakers in these sessions.

Sponsored Symposia:

1. Systems understanding of the impact of the Nrf2 pathway on chemical toxicity and cell fate
2. Using multi- and transgenerational effects of environmental exposures in diverse animal models for assessment of human health risks
3. Novel roles of reactive oxygen species (ROS) in human diseases: Why ROS never gets stale

Sponsored Workshops:

1. Mitochondria as the central target of environmental contaminants, pharmaceutical agents, and toxicants: mechanisms of toxicity and disease
2. The role of the epigenome in exposure effects, susceptibility, and public health
3. Bioactivity-based margin of exposure safety assessment: the next stop along the road to 21st century safety assessments
4. Multi-omics in predictive toxicology: Development and application in environmental monitoring programs
5. Screening chemicals for neurotoxicity outcomes—using large datasets and multiple endpoints to develop “toxicity profiles”
6. Which human cell lines should I use? Choosing the appropriate biological systems for high-throughput toxicity testing

Contemporary Concepts in Toxicology Workshop

The MSBSS will sponsor the 2016 “miRNA biomarkers for toxicology” CCT workshop, chaired by Alison Harrill (University of Arkansas for Medical Sciences) and Warren Glaab (Merck), on March 12th in New Orleans, LA. MSBSS support funded travel scholarships for all presenting graduate students and postdoctoral fellows for the meeting. The SOT satellite meeting will have over 130 attendees and 22 poster presentations.

Continuing Education:

1. Discovery and Validation of miRNA Biomarkers Bridging Preclinical and Clinical Toxicity: Lessons Learned from Hepatotoxicity
2. Basic Principles and Practices for Applying Epigenetics in Mechanistic Toxicology
3. Advancing the Detection, Imaging, and Pitfalls in Monitoring Oxidative Stress in Health and Disease
4. Next-Generation Sequencing in Toxicogenomics
5. Exploring Chemical Space in the New Toxicity Testing Paradigm: From Data Curation to Computational Simulations
6. Zebrafish As a Tool in Toxicology and Drug Discovery Screening
7. Genetics and Population Variability in Chemical Toxicity: The What, the How, and So What?

Graduate Student and Postdoctoral Fellow Awards

The highlight of the MSBSS reception at the annual meeting is the recognition of the graduate student and post-doctoral fellow award winners. The awards are extremely competitive and are an excellent way to enhance career development and become involved in the society. Below are the 2015 Awardees with pictures, followed by the winners of this year's awards.

These awards are covered by your Endowment Fund – The Molecular & Systems Biology Student Award Fund. Think about making a contribution today!

2015 Graduate Student Award Recipients

1st Place: Kelly Fader

"The role of the intestine in TCDD-mediated steatohepatitis in C57BL/6 Mice."



2nd Place: Dilshan Harischandra

"Lysosomal Dysfunction Regulates the Release of z-Synuclein Protein Aggregates from Exosomes during Manganese-induced Neurotoxic Insult."

3rd Place: Prajakta Shimpi

"Early Epigenetic Modulation of Nrf2 and Lipogenic Genes by PNPP Exposure of Bisphenol A is Associated with Hepatic Steatosis in Female Mice."



2015 Postdoctoral Award Recipients

1st Place: Dr. Natalia VanDuyn

"Building Predictive Gene Signatures Through Simultaneous Assessment of Transcription Factor Activation and Gene Expression."



2nd Place: Dr. Aditya Joshi

"Carbamoyl Phosphate Synthase 1 mediated homocitrullination of histone H1.2 constitutes a novel epigenetic mark associated with Aryl hydrocarbon Receptor driven gene expression."

3rd Place: Dr. Anna Kopec

"Role of Fibrin(ogen) in Hepatocyte Proliferation after Acetaminophen Overdose."



Join us in Congratulating this year's awardees who will present some of their research at the MSBSS reception on Tuesday, March 15th from 6:00-7:30 PM in the Hilton Riverside Grand Salon 21

2016 MSBSS Paper of the Year Award

Congratulations to the third annual MSBSS Paper of the Year Award winner. This year's MSBSS Paper of the Year Award went to Dr. Aditya Joshi and colleagues. The paper was published in the Journal of Pharmacology and Experimental Therapeutics (2015) 353(1):201-212, and titled "Aryl hydrocarbon receptor-dependent stanniocalcin 2 induction by cinnabarinic acid provides cytoprotection against endoplasmic reticulum and oxidative stress."



2016 Graduate Student Award Recipients

1st Place: Rance Nault, Michigan State University

2nd Place: Gloria Garcia, Oregon State University

3rd Place: Jeff Willy, Indiana University

3rd Place: Vivekkumar Dadhania, University of Louisiana at Monroe

2016 Postdoctoral Award Recipients

1st Place: Anna Kopec, Michigan State University

2nd Place: Jenna Currier, US EPA

3rd Place: Priyanka Trivedi, Harvard Medical School

MSBSS Commitment to Trainees

The Molecular & Systems Biology Specialty Section welcomes student involvement and also encourages students to apply for graduate student and post-doctoral fellow awards given at the SOT annual meeting. Three awards are given each year that include a monetary award and plaque. For further information on awards, activities, and interests of the Molecular & Systems Biology Specialty Section, please contact your MSBSS student representative:

Derik Haggard: derik.haggard@gmail.com,

or consult the **MSBSS Website:**

<http://www.toxicology.org/groups/ss/MSBSS/index.asp>

or the **SOT award listings at:**

<http://www.toxicology.org/awards/sot/awards.asp>

MSBSS Graduate Student and Postdoctoral Member Activities

Monday, March 14, 11:30 AM-1:00 PM - In Vitro Toxicology Lecture and Luncheon for Students (Ticket Required)

Tuesday, March 15, 12:00-1:15 PM - Postdoctoral Assembly (PDA) Luncheon (Ticket Required):

Tuesday, March 15, 7:30-9:00 PM - Tox ShowDown

March 14, 15, or 16, 10:00-11:00 AM - Trainee Discussion with Plenary Presenters or Medical Research Council (MRC) Lecturer (Tickets Required)

Wednesday, March 25, 4:00-5:00 PM - Undergraduate Student Meeting

Monday, March 14-Thursday, March 17 Time Varies by Group - Chat With an Expert

Monday, March 14-Wednesday, March 16, Time Varies by Group - Poster Tours for Trainees

Awards and Fellowships

In addition to the awards offered by MSBSS, SOT provides numerous opportunities to recognize outstanding student and postdoctoral trainees and assist with travel to the annual meeting. Please visit <http://www.toxicology.org/awards/sot/awards.asp> for further instructions and eligibility.

Professional Development Webinars

The PDA and GSLC offer several webinars throughout the year on professional development for trainees. Please be on the lookout for emails about these great webinars.

FREE Online Continuing Education Courses Available to Trainees

SOT continues to expand the list of online Continuing Education (CE) courses from the courses that are taught at the annual meetings. If you are interested in a CE course, but were unable to attend at an annual meeting, you can access recorded versions of these talks **at no charge to SOT postdoc and graduate student members!!** Sixty-four CE courses presented at Annual Meetings from 2009 to 2015 are available. In addition, PDF course books for online CE courses are available. Please take advantage of this opportunity!

To browse through the courses, use the following link:

<http://www.toxicology.org/education/ce/onlineCourses.asp#course>

MSBSS Review of Proposals for SOT 2017

Proposals for the annual SOT 2017 meeting are due to be submitted shortly after the 2016 meeting. If you have ideas for innovative sessions that may contribute to the 2017 meeting, your MSBSS officers are available to provide suggestions and assist you with the development and sponsorship of your proposals. This practice has proven invaluable over the past few years in terms of success rates for acceptance by the Program Committee. Moreover, the MSBSS leadership notes that sessions in previous years that have been co-chaired by junior faculty members were selected, which demonstrates that a winning symposium/workshop/CE course does not depend on the seniority of the co-chairs. Students and Post-Docs are also strongly encouraged to communicate with the MSBSS officers to develop any ideas they may have. If you would like the MSBSS officers to review your proposal, we encourage you to send your submission as early as possible to the VP (Marc Gillespie, gillespm@stjohns.edu) to allow sufficient time to review and provide comments on your proposal prior to submission.

If you need more information on our specialty section, please check out our web site:

<http://www.toxicology.org/groups/ss/MSBSS/index.asp>

