

MOLECULAR AND SYSTEMS BIOLOGY SPECIALTY SECTION ANNUAL REPORT: 2016-2017

[May 1, 2016 to April 30, 2017]

I. Officers/Committees:

<u>Officers</u>	<u>2016-2017</u>	<u>2017-2018</u>
President:	Bhagavatula Moorthy	Marc Gillespie
Vice President:	Marc Gillespie	Shaun McCullough
Vice President-Elect:	Shaun McCullough	Dana C. Dolinoy
Secretary/Treasurer:	Robert S. DeWoskin	Robert S. DeWoskin
Past President	Kristine ("Kristie") Willett	Bhagavatula Moorthy
Senior Councilor:	Richard S. Paules	Jill Franzosa
Junior Councilor:	Jill Franzosa	Tamara Tal
PDA Representative:	Grace Chappell	Karilyn E. Sant
GSLC Representative:	Derik Evan Haggard	Derik Evan Haggard
Junior Student Representative	Emma Bowers	Katelyn Lavrich

Committees: N/A.

Elected in 2017:

Vice-President-Elect: Dana C. Dolinoy (University of Michigan School of Public Health)

Secretary/Treasurer: Rob DeWoskin (etioLogic, LLC)

Junior Councilor: Tamara Tal (US EPA)

Postdoctoral Representative: Karilyn E. Sant (University of Massachusetts Amherst);

Junior Student Representative: Katelyn Lavrich (University of North Carolina Chapel Hill)

Membership: MSBSS currently has 202 members.

II. Activities:

2017 SOT Annual Meeting Reception was held in Baltimore, MD on March 15, 2017

Approximately **100** people were in attendance.

Bhagavatula Moorthy called the meeting to order at 6:00 PM on March 15, 2017.

Meeting Agenda: (see Attachment 1)

Awards:

Post-Doctoral Awards

Sarah Lacher - University of Minnesota, Advisor-Matthew Slattery: "Toxicogenomic mapping of disease-associated genetic variation links polymorphic antioxidant response elements to neurodegeneration."

Graduate Student Awards

1st Place: Elizabeth (Liz) Mutter-Rottmayer, University of North Carolina-Chapel Hill, Advisor-Cyrus Vaziri: “Defining a cancer cell-specific mechanism of resistance to Topoisomerase I poisons.”

2nd Place: Gloria Garcia, Oregon State University, Advisor-Robert L. Tanguay: “AHR-dependent control of gene expression: in vivo characterization and transcriptome profiling of a conserved long-noncoding RNA.”

3rd Place: Amin Sobh, University of California- Berkeley, Advisor-Chris Vulpe: “Genome-wide CRISPR-Cas9 Screens Identify Genes Involved in Toxic Responses to Arsenic and Acetaldehyde.”

Best Paper of the Year

This year’s MSBSS Paper of the Year Award went to **Dr. Marpe Bam and coauthors** from the University of South Carolina. The paper titled “Dysregulated Immune System Networks in War Veterans with PTSD is an Outcome of Altered miRNA Expression and DNA Methylation” (DOI: 10.1038/srep31209) was published in a 2016 Scientific Reports.

2017 SOT Annual Meeting Courses/Sessions:

The MSBSS was the primary sponsor of three symposia, a workshop, and an Informational Session, at the 2017 Annual Meeting, as well as a secondary or tertiary sponsor of several additional symposia, workshops and continuing education courses.

Sponsored Symposia:

1. miRNAs As Translational Biomarkers of Kidney Injury
2. Quantitative Systems Toxicology for Chemical Safety Assessment
3. Translational Control in Disease Progression and Xenobiotic-Mediated Toxicity
4. The Next Technology Wave: Biosensors, Extreme Computing, and Organ Chips for Predicting Cardiovascular Toxicity

Sponsored Workshop:

1. Data Standardization Across ‘Omic Platforms in Regulatory Toxicology
2. Fit for Purpose: Using Computational Models for Risk
3. Is There a Concern for Neurotoxicity from Replacement Organophosphorus Flame-Retardants?: Insights Using Molecular Approaches, Systems Biology, and Human Exposure

Informational Session:

1. Bioinformatics Tools for Accelerated Hypothesis Generation and Mechanistic Insights

Historical Highlights Session:

1. NIEHS Superfund Research Program: A History of Cutting-Edge Science and Innovative Technologies

Contemporary Concepts in Toxicology Workshop

The MSBSS sponsored an SOT Contemporary Concepts in Toxicology (CCT) meeting titled “Toxicoepigenetics: The Interface of Epigenetics and Risk Assessment,” on November 2–4, 2016, in Tysons, Virginia. The goal of the meeting was to bring basic researchers and risk assessors together for a collaborative discussion on how these two communities can work together to address critical questions in the field. The meeting was organized Dr. Shaun McCullough and Dr. Dolinoy.

Treasurers Report (Rob DeWoskin):

The MSBSS General Fund financial statement as of May 31, 2017 is shown below. Note that income from the CCT sponsored event, and for membership dues and interest are not reflected in the May report, and will likely be updated in June:

MSBSS General Fund Financial Statement (as of May 31, 2017)	
Ordinary Income/Expense:	
Income	
Contributions	-
Proceeds from the CCT Mtg:MiRNA	\$500
Membership Dues (\$15/member)	-
Registration	\$1857
Interest	-
Total Income	\$2357
Expenses	
Awards - Sections	\$850
Plaques	\$276
Annual Meeting/Reception	\$5343
Sponsorship CCT Mtg: Toxicol Epigenomics	\$6,000
Endowment 3:1 match/Y-2017	-
Executive Meetings	-
Mentoring Activities (matched by SOT-HQ)	\$553
Misc	-
Total Expense	\$13,003
Excess (Deficiency) of Revenue over Expenses	-\$10,645
Starting Value	\$43,179
Ending Value	\$32,533

The quarterly MSBSS endowment fund statement as of March 2017 is shown below. The MSBSS endowment fund continues to benefit from SOT's and the MSBSS endowment matching program, where SOT matches the contribution at a 1:1 ratio, and MSBSS matches at 3:1. The MSBSS match for the \$750 contribution listed below will appear in the June quarterly report.

MSBSS Endowment Fund (Quarterly Report - March 2017)	
Contributions	
Member Contributions	\$750
MSBSS Matching Funds	-
SOT Matching Funds	\$750
Total Contribution	\$1,500
Gain (loss) on Investments	
Interests and Dividends	\$992
Capitol gain (loss)	\$2,352
Total Return	\$3,344
Total Income	\$4,844
Expenses	
Awards	\$1,250
Other	-
Total Expense	\$1,250
Excess (Deficiency) of Revenue over Expenses	\$3,594
Starting Value	\$40,480
Ending Value	\$44,075

Graduate Student and Postdoctoral Report

This year the MSBSS held their 3rd annual Networking Luncheon for Trainees at the SOT Annual Meeting in Baltimore, MD. The luncheon at Fogo de Chão on Wednesday, March 15th, brought together students, postdocs, and mentors in MSBSS-related fields to facilitate networking and career development in a fun, relaxed atmosphere. Attending were: more than 20 graduate students

and postdoctoral trainees with over 100 experts in molecular and systems biology . In addition to the MSBSS General Fund, the SOT Career Resources and Development Committee (CRAD) provided matching funds to sponsor this year's exciting event. The MSBSS extends special thanks Drs. Bhavesh Ahir and others for planning and organizing the Luncheon and multiple volunteers their time as mentors. The MSBSS hopes to continue this tradition of hosting mentoring events for trainees at future Annual SOT Meetings.

The Graduate Student Leadership Committee (GSLC) Events:

MSBSS graduate students serve as representatives on the GSLC, and MSBSS trainees participated in the following events coordinated by GSLC at the 2017 Annual Meeting:

- "Chat with an Expert" where trainees meet experts from industry, government, and academia to learn about their research and learn from their experiences.
- Tox ShowDown, an engaging quiz game with questions concerning toxicology as it relates to society, history, arts, and culture. Expert toxicologists put their knowledge to the test and competed against other experts for various prizes.
- Student/Postdoctoral Scholar Mixer - held each year to provide an opportunity for trainees to build valuable relationships with colleagues and learn more about their experiences, and introduce attendees to the various Specialty Sections, Regional Chapters, and Special Interest Groups in the society.

The MSBSS Graduate Student Representatives visited posters highlighting related research, and recruited new graduate students and postdoctoral associates to the specialty section. They also represented MSBSS at the annual GSLC meeting where future student outreach and development opportunities are organized.

Newsletters: The Fall 2017 MSBSS newsletter is currently being planned for delivery to the membership in September 2017; the Spring 2017 newsletter is now available on our MSBSS web site in ToXchange.

Contributions to the SOT Main or MSBSS ToXchange websites:

- The [MSBSS Spring 2017 Newsletter](#) .
- [2016-2017 Officer Candidate Biosketches](#) - to MSBSS members via ToXchange.
- Numerous announcements for webinars or other items of interest to members – to MSBSS members via ToXchange.

Attachment 1 – 2017 MSBSS Reception Agenda (Baltimore, MD)

Molecular & Systems Biology Specialty Section Reception
 Wednesday, March 15th 6:00 – 7:30 pm
Hilton Baltimore in Key Ballroom 11

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Past President	Kristie Willett
Senior Councilor:	Richard S. Paules
Junior Councilor:	Jill Franzosa
PDA Representative:	Bhaves Ahir
Senior Student Representative	Derik Evan Haggard
Junior Student Representative	Emma Bowers

Welcome and Introduction of New Officers (Moorthy)

Vice President-Elect - Dana C. Dolinoy, PhD

Secretary/Treasurer - Rob DeWoskin, PhD

Junior Councilor - Tamara Tal, PhD

Postdoctoral Representative - Karilyn E. Sant, PhD

Junior Graduate Student Representative - Katelyn Lavrich, BS

- 1) Membership/ Treasurers Report/ Endowment Update (DeWoskin)
- 2) Postdoc activities and Mentoring Luncheon (Emma Bowers)
- 3) Student Report (Haggard/Bowers)
- 4) 2017 Program (Gillepsie)
- 5) 2018 Program Solicitation (McCullough)
- 6) CCT report (Harrill)
- 7) Toxsci Update (Willet)
- 8) Student/Postdoc Awards and Ribbon distribution (Paules)
- 9) Best Paper Award (Franzosa)
- 10) New Business