

October 29, 2020

MOLECULAR AND SYSTEMS BIOLOGY SPECIALTY SECTION

MSBSS Fall Newsletter

In this issue:

- 2020 award winners!
- Got mentorship?
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- Who are we?

Welcome to our 2020 newsletter

Dear MSBSS members,

2020 has been an unprecedented year for our shared and respective communities. During this time of continued social unrest, the leadership committee of MSBSS has taken time to reflect on how systemic racism impacts who participates in MSBSS and who benefits from MSBSS. We recognize that the current advertisement, recruitment and award paradigms

have not been adequate in letting the largest possible group of scientists become involved and have not fully addressed unequal access to resources. To this end, MSBSS is establishing a new MSBSS Inclusion Working Group. The goal of this group is to generate initiatives that promote diversity and inclusion in MSBSS and SOT. To join this working group, please email Jess Plavicki (jessica_plavicki@brown.edu) by 11/16/2020 and use the subject line: ATTN: new MSBSS Inclusion Working Group. Our goal is to have our first Working Group meeting in December to brainstorm and prioritize initiatives.

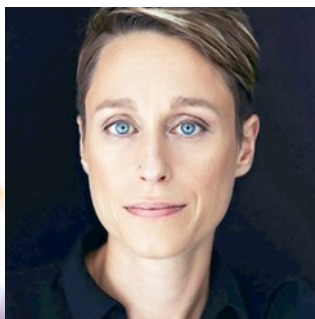
An essential component of building a diverse and equitable MSBSS community is the representation of all of its constituents. As we turn to the upcoming elections for available leadership positions, I ask you to help us build a diverse MSBSS leadership team that can serve all members of the MSBSS community. Please consider running for an open position or nominating someone else. You will find details about the open positions in this newsletter on page 5. Please contact Vice President Brian Chorley (chorley.Brian@epa.gov) if you would like to run or nominate someone for an open seat.

Finally, I hope that in midst of all of the challenges we have faced this year that you still have been able to find some joy and wonder in our world, be it science, family, friends and/or art. I look forward to seeing you at the virtual 2021 meeting and hope to see you all in San Diego in 2022.

Sincerely,



Jess Plavicki, SOT MSBSS President



Contact us! Our email is msbss.sot@gmail.com

And follow us on Twitter for the latest SOT,
MSBSS, and cool science news!



@msbss_sot



SOT MOLECULAR AND SYSTEMS BIOLOGY SPECIALTY SECTION 2020 ANNUAL MEETING AWARD WINNERS

Congratulations to award winners from the 2020 Annual SOT meeting. Although the meeting was not in person this year, we honored our winners at a virtual ceremony on October 14th.



Chelsea Weitekamp

Paper of the Year Award

Triclosan-selected host-associated microbiota perform xenobiotic biotransformations in larval zebrafish.

CA Weitekamp*, D Phelps*, A Swank, J McCord, JR Sobus, T Catron, S Keely, N Brinkman, T Zurlinden, E Wheaton, M Strynar, C McQueen, CE Wood, and T Tal. *co-first authors

Honorable Mentions

Increased MDR1 Transporter Expression in Human Brain Endothelial Cells Through Enhanced Histone Acetylation and Activation of Aryl Hydrocarbon Receptor Signaling.

D You, X Wen, L Gorczyca, A Morris, JR Richardson, LM Aleksunes

Manganese activates NLRP3 inflammasome signaling and propagates exosomal release of ASC in microglial cells.

S Sarkar, D Rokad, E Malovic, J Luo, DS Harischandra, H Jin, V Anantharam, X Huang, M Lewis, A Kanthas, AG Kanthasamy.



Drake Phelps

Postdoctoral Research Award

1st place: Subham Dasgupta; Mentor: David Volz

High-Content Screening in Zebrafish Identifies Perfluorooctanesulfonamide as a Potent Developmental Toxicant

2nd place: Lauren Poole; Mentor: Jim Luyendyk

Protease-activated receptor-1 expressed by hepatic stellate cells drives coagulation activation and fibrosis in experimental chronic liver injury

3rd place: Abhishek Venkatratnam, Mentor: Rebecca Fry

Sodium arsenite alters glucose regulation-associated transcripts in sperm cells of C57BL/6J mice



Subham Dasgupta



Mathia Colwell

Graduate Student Research Award

1st place: Mathia Colwell, Mentor: Chris Faulk

Preferential Tissue Hypomethylation of the Mouse Epigenome by Low Dose Decitabine Exposure

2nd place: Archit Rastogi, Mentor: Alicia Timme-Laragy

Pancreatic Nrf2 expression and organ morphogenesis is altered by modulating Glutathione in the Developing Zebrafish (Danio rerio) Embryo

3rd place: Jennifer Schaefer, Regulation of mouse uterine aquaporin expression in the preimplantation period and the impact of ovarian superovulation



Emily Severance

Undergraduate Research Award

1st place: Emily Severance, Mentor: Alicia Timme-Laragy

Glutathione Depletion and Nrf2 Activation Underlie PFOS Toxicity in Human Kidney Cells

2nd place: Victoria Salemm, Mentor: Sasha Suvorov

Identifying Molecular Pathways Highly Sensitive to Chemical Exposure using Bioinformatic Methods

3rd place: Nicholas Zacharewski, Mentor: Kelly Fader

Dose-Dependent Effects of 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD) on Acetyl-CoA Metabolism



MSBSS MENTORING EVENTS

VIRTUAL MENTORING PANEL

Last Thursday of Every Month

2-3pm PST

CONSULTING

JUN

JUL

EARLY/MID ACADEMIA

REGULATORY GOVERNMENT

AUG

OCT

PHARMACEUTICAL INDUSTRY

Catrin Hasselgren, PhD

Principal Scientist, Genetech Inc

Lauren Lewis, PhD

Investigative Toxicologist, Takeda

NOV

LATE CAREER ACADEMIA

RESEARCH GOVERNMENT

JAN

FEB

NON-TRADITIONAL CAREERS

RSVP at:

<https://forms.gle/fLLsEg8BsSQvZaVo8>



MOLECULAR AND SYSTEMS BIOLOGY SPECIALTY SECTION MEMBER HIGHLIGHTS

Awards



Past SOT MSBSS President, Dana Dolinoy, PhD Receives RIVER Award

Dr. Dolinoy was recently awarded a \$6.9 million R35 award from the National Institute of Environmental Health Sciences (NIEHS). The award, granted from the NIEHS Revolutionizing Innovative, Visionary Environmental Health Research (RIVER) program, will evaluate the effects of environmental exposures on the epigenome and expand the repertoire of epigenetic editing tools.

Current SOT MSBSS President, Jessica Plavicki, PhD Receives ONES Award

Dr. Plavicki is the recipient of an Outstanding New Environmental Scientist Award (ONES) from the National Institute of Environmental Health Sciences (NIEHS). The award will be used to investigate how toxicant exposures may disrupt the development of a type of brain cell that is necessary for learning, memory, information processing, and behavior.



Former SOT MSBSS Senior Councilor, Kari Sant, PhD Receives K01

Dr. Sant received a career development grant (K01) from the National Institute of Health (NIH) to study how exposures to chemicals affect the development of metabolic syndrome in live zebrafish. This grant will explore how exposures to chemicals that modulate PPAR signaling impact pancreatic development during the embryonic and juvenile stages.

“Everything is theoretically impossible until it is done.”

-Robert A. Heinlein

Highlighted Publications

Roy MA, Sant KE, Venezia OL, Shipman AB, McCormick SD, Saktrakulka P, Hornbuckle KC, Timme-Laragy AR. **The emerging contaminant 3,3'-dichlorobiphenyl (PCB-11) impedes Ahr activation and Cyp1a activity to modify embryotoxicity of Ahr ligands in the zebrafish embryo model (Danio rerio).** Environ Pollut. 2019. Nov;254(Pt A):113027.



Gaballah S, Swank A, Sobus JR, Howey XM, Schmid J, Catron T, McCord J, Hines E, Strynar M, Tal T. **Evaluation of Developmental Toxicity, Developmental Neurotoxicity, and Tissue Dose in Zebrafish Exposed to GenX and Other PFAS.** Environ Health Perspect. 2020 Apr;128(4):47005.



TREASURER REPORT

The MSBSS General Fund Financial statement (as reported June 2020) is below. Our specialty section is in good financial standing with sufficient funds to support our meeting and award activities in 2021.

	General Fund	Endowment
starting balance	\$ 32,896.00	\$ 54,183.00
trainee awards	\$ (1,241.00)	\$ (1,900.00)
trainee support	\$ (1,000.00)	
mentoring activities	\$ (2,933.00)	
membership dues	\$ 3,280.00	
earned interest	\$ 1,550.00	\$ 890.00
contributions		\$ 500.00
net changes	\$ (344.00)	\$ (510.00)
ending balance	\$ 32,553.00	\$ 53,673.00



CALL FOR 2021 AWARD AND OFFICER APPLICATIONS

We are currently accepting submissions for the 2020 Paper of the Year Award, MSBSS Postdoctoral Fellow Research Award, Graduate Student Research Award, and Undergraduate Research Award.

Applicants must be SOT members (accepted or pending). Applicants do not need to be a MSBSS member to apply, but do need to be member at the time the award is presented.

The deadline for the awards is December 5, 2020 at 11:59 PM PST.

Application questions should be directed to Larissa Williams (lwillia2@bates.edu)
More details are found at <https://www.toxicology.org/groups/ss/msbss/awards.asp>

“Fight for the things that you care about, but do it in a way that will lead others to join you.”

-Ruth Bader Ginsburg

OFFICERS TO BE ELECTED FOR NEW TERMS BEGINNING MAY 1, 2021

Vice President-Elect

(3 year active term: VP-Elect, VP, President + 1 year as Past-President)

Junior Councilor

(2 year term, becomes the Senior Councilor in Y2)

Postdoctoral Representative

(1 year term)

Graduate Student Junior Representative

(2 year term, becomes the Senior Rep in Y2)

If you would like to nominate yourself or someone else, please send the name and the position of interest to **Brian Chorley (chorley.brian@epa.gov)** no later than **December 1, 2020.**

Candidates must submit a biosketch and photo for the ballot, which will be sent to members in early 2021.

The election results will be announced at the MSBSS 2021 Annual Virtual Meeting!



Jessica Plavicki
President

Dana Dolinoy
Past-President

Brian Chorley
Vice President



Courtney McClure
Junior Student Rep

Tamara Tal
Vice President-Elect



MSBSS LEADERSHIP TEAM 2020 - 2021



Aalekhya Reddam
Senior Student Rep

Lindsay Holden
Secretary/Treasurer



Elizabeth Martin
Postdoc Rep

Larissa Williams
Senior Councilor



Jessica LaRocca
Junior Councilor



Register for the 2021 Virtual SOT Annual Meeting!

Join us for the MSBSS-sponsored symposia and workshops