Greetings from your Mechanisms Specialty Section Leadership! As we prepare for another exciting year, I’d like to take a moment to look back on several of the accomplishments of our trainees and Mechanisms endorsed/sponsored activities that occurred over the past year.

As one of the largest and oldest Specialty Sections (SS) within the Society of Toxicology (SOT), we offer EIGHT prestigious awards to trainees for meritorious research and travel funds to attend the Annual Meeting held every March (Pgs. 2-3). As further testament to the high caliber of our trainees, many of our award winners have a history of continuing as key leaders within SOT. All trainees are strongly encouraged to review current application requirements; deadlines (Pg. 5) for several 2020 awards are quickly approaching in October.

In addition to trainee awards, The Mechanisms SS supports trainees in several other ways as well. The mentoring event held at the Annual Meeting in collaboration with the Molecular and Systems Biology SS has been a huge success (Pg. 6) that we hope to continue for years to come. Additionally, the Mechanisms SS endorsed the Cellular and Molecular Mechanisms of Toxicity Gordon Research Conference this summer, which is heavily attended by Mechanisms SS members. Thanks to support of several contributors including SOT and EUROTOX, all trainees were able to receive some form of support to attend the meeting (EUROTOX travel fellowship recipients pictured at the conference below).

The success of our trainees is due to the tremendous support and leadership from our mentors. We sincerely thank those of you that serve as award judges each year and welcome anyone interested in getting involved in future activities. We also invite our members to consider nominating one or more of their colleagues for our Career Achievement Award (Pg. 8) to recognize their outstanding commitment to mechanistic toxicology research and mentorship. Lastly, please take note of leadership positions that will be on the ballot this fall (Pg. 8). As always, we welcome new faces and fresh ideas!

Cheers!
Rhiannon N. Hardwick, PhD, DABT
President, Mechanisms Specialty Section

OFFICERS
2019-2021

Rhiannon N. Hardwick
President

Brian J. Day
Vice President

Daniel D. Petersen
Vice President-Elect

Jonathan M. Maher
Senior Councilor

James P. Luyendyk
Senior Councilor

John Clarke
Junior Councilor

Dahea Diana You
Postdoc Representative

Emily Marques
Student Representative

Donna D. Zhang
Past President
ENDOWMENT FUND STATUS

Please consider making a tax-deductible donation to help support the future generations of toxicologists. Although all the awards are well endowed, only a small portion of funds can be accessed every year. So small donations can make a big difference in supporting our talented students!

Carl C. Smith
Graduate Student Award
$102,727

Gabriel L. Plaa
Education Award
$90,703

Renal Toxicology
Fellowship Award
$67,467

Robert J. Rubin
Student Travel Award Fund
$41,438

Ronald G. Thurman
Student Travel Award
$47,489

Sheldon D. Murphy
Memorial Fund
$87,812

Donate Here!
2019 AWARD WINNERS
Announced at the Mechanisms Business Meeting and Reception, March 11, 2019 in Baltimore, MD
CONGRATULATIONS WINNERS!!

Career Achievement Award
Lois Lehman-McKeeman, PhD ATS
Vice President, Pharmaceutical Candidate Optimization
Bristol-Myers Squib

Carl C. Smith Graduate Student Award
(pictured below, left)
1st—Robert Freeborn, Michigan State University
2nd—Kelly Hanson, University of Rochester
3rd—Jessica Murray, University of Pennsylvania

Gabriel L. Plaa Education Award
(pictured below, right)
1st—Matthew Dodson, University of Arizona
2nd—Aseel Eid, Florida International University
3rd—Asmita Pant, Michigan State University

Renal Toxicology Award
1st—Yu-Syuan Luo, Texas A&M University
2nd—Tarana Arman, Washington State University
3rd—Yu-Wei Chang, Texas Tech University

Sheldon D. Murphy Student Travel Award
Elizabeth Corteselli, US EPA
Ludwik Gorczyca, Rutgers University
Tiffanie Hargraves, University of Arizona
Archit Rastogi, University of Massachusetts Amherst
Argel Isla Robles, University of Arizona

Ronald G. Thurman Student Travel Award
Jephte Akakpo, University of Kansas Medical Center
Monika Roy, University of Massachusetts Amherst

Postdoctoral Student Travel Award
Lauren Poole Hardy, Michigan State University
Andreas Henriquez, ORISE NHEERL

Robert J. Rubin Student Travel Award
Robert Freeborn, Michigan State University
ENDORSED SESSIONS AND ACTIVITIES AT 2019 ANNUAL MEETING

Each year at the SOT Annual Meeting the Mechanisms SS endorses several items on the program, many of which were developed by Mechanisms members. Mechanisms Leadership now offers a pre-review period for proposal feedback in an effort help increase acceptance rates. Final proposals are then submitted to the Scientific Program Committee followed by official endorsement by Specialty Sections.

Proposals are always due shortly after each Annual Meeting, thus requiring a bit of planning ahead. If you are interested in creating a proposal for a Continuing Education Course, Symposia, or Workshop don’t forget to reach out for pre-review. All inquiries can be made to: sotmechanisms@gmail.com.

<table>
<thead>
<tr>
<th>Session Type</th>
<th>Title</th>
</tr>
</thead>
</table>
| Continuing Education Courses | • Assay Development Principles and Good Research Practices for Rigor and Reproducibility in In Vitro Toxicology  
• Structural and Functional Alterations of Mitochondria in Chemically Induced Cytotoxicity |
| Symposia                     | • Alpha-Synuclein: A Good Protein Turned Bad in Chronic Brain Diseases with Toxicological Implications  
• Novel Genetic-Based Tools for Evaluating Toxicity Potential, Mechanism of Action, and Population Dynamics  
• Stem Cells and Metals Toxicity: From Tissue Regeneration and Repair to Carcinogenesis  
• Systems Toxicology Approaches to the Science of Safety Evaluation  
• Explicating the Pathogenic Environmental Factors in Nonalcoholic Fatty Liver Disease  
• Perfluoroalkyl Substances (PFAS): Global and Persistent Environmental Contaminants  
• The Role of Dynamic RNA Modifications in Environmental Response and Disease  
• Role of Oxidative Stress in Health and Disease: Mechanisms, Methods of Detection, and Biomarkers  
• Preconception Exposure to Toxicants: Assessing Gamete Quality and Reproductive Outcomes  
• New Mechanistic Insights into Causes and Outcomes of Epigenetic Dysregulation by Carcinogenic Metals |
| Workshops                    | • Mechanisms and Effects of Diabetogenic Environmental Metals: Type II Diabetes Mellitus and Diabetic Kidney Disease  
• Pharmaceutical Investigative Toxicology: Case Studies in Optimizing Drug Discovery and Guiding Human Risk Assessment  
• NextGen Renal Proximal Tubule Toxicity Screening: Novel Cellular Model and Complex Culture Platforms  
• Emergent Mechanisms of Cytochrome P450 Gene Regulation: Defining an Improved Roadmap toward 21st-Century Pharmacogenomics  
• Use of Adverse Outcome Pathways to Design Nonanimal Testing Strategies for Assessing Inhalation Toxicity |
CALL FOR 2020 TRAINEE AWARD APPLICATIONS!!!

Award season is quickly approaching! The Mechanisms SS has a rich history of providing awards to trainees for meritorious research and travel assistance to attend the SOT Annual Meeting. Awards are available to graduate students and postdocs from across SOT. You do not need to be a Mechanisms member to apply, though you are encouraged to join.

Awards and application deadlines are listed below. All award applications must be submitted to sotmechanisms@gmail.com. Leadership contacts are provided for inquiries about the application process and specific award eligibility only. To avoid loss of your application, please do not submit applications to individual Award Administrators.

<table>
<thead>
<tr>
<th>Award</th>
<th>Amount(s)</th>
<th>Deadline</th>
<th>Award Administrator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Postdoctoral Student Travel</td>
<td>$500 each</td>
<td>October 18</td>
<td>James P. Luyendyk (<a href="mailto:luyendyk@msu.edu">luyendyk@msu.edu</a>)</td>
</tr>
<tr>
<td>Sheldon D. Murphy Student Travel</td>
<td>$500 each</td>
<td>October 18</td>
<td>Jonathan M. Maher (<a href="mailto:maher.jonathan@gene.com">maher.jonathan@gene.com</a>)</td>
</tr>
<tr>
<td>Carl C. Smith Graduate Student</td>
<td>$750-2000</td>
<td>October 18</td>
<td>John Clarke (<a href="mailto:j.clarke@wsu.edu">j.clarke@wsu.edu</a>)</td>
</tr>
<tr>
<td>Renal Toxicology</td>
<td>$250-1000</td>
<td>October 18</td>
<td>Daniel D. Petersen (<a href="mailto:Petersen.Dan@epa.gov">Petersen.Dan@epa.gov</a>)</td>
</tr>
<tr>
<td>Ronald G. Thurman Student Travel</td>
<td>$500 each</td>
<td>October 18</td>
<td>Rhiannon N. Hardwick (<a href="mailto:rhardwick@theravance.com">rhardwick@theravance.com</a>)</td>
</tr>
<tr>
<td>Gabriel L. Plaa Education</td>
<td>$750-1500</td>
<td>December 1</td>
<td>Donna D. Zhang (<a href="mailto:dzhang@pharmacy.arizona.edu">dzhang@pharmacy.arizona.edu</a>)</td>
</tr>
<tr>
<td>Robert J. Rubin Student Travel</td>
<td>$750 each</td>
<td>December 30</td>
<td>Brian J. Day (<a href="mailto:DayB@NJHealth.org">DayB@NJHealth.org</a>)</td>
</tr>
</tbody>
</table>

For detailed award descriptions, eligibility, and application instructions:

Mechanisms Award Info:
http://www.toxicology.org/groups/ss/Mechanisms/awards.asp

Submit ALL Award Applications To:
sotmechanisms@gmail.com
GREETINGS FROM YOUR POSTDOC REPRESENTATIVE

Hello, Postdocs! My name is Dahea You and I am a postdoctoral fellow in the division of National Toxicology Program at National Institute of Environmental Health Sciences. I am delighted to serve as the 2019-2020 Postdoctoral Representative for the Mechanisms Specialty Section (SS). I have been a member of SOT since 2014 and actively involved in the Society by serving as a graduate student representative and working within the SOT Graduate Student Leadership Committee (GSLC). The SOT has provided great networking opportunities and unique experiences that have greatly helped my professional development and transition from a graduate student to a postdoctoral scientist. I highly encourage postdoctoral members to get engaged within the Society and take advantage of various resources and opportunities provided to the trainees. Particularly, the SOT Postdoctoral Assembly (PDA) coordinates and sponsors numerous activities targeted for postdoctoral trainees.

They include:

- Poster Tours for Trainees
- PDA Luncheon
- Webinars and Career Development Sessions

More information about each of these events can be found on the PDA website.

Also, the Mechanisms SS strongly supports the development of the trainees by offering several awards recognizing the scientific accomplishments and leadership of the trainees (more information can be found on our website), and hosting an Annual Mentoring Reception co-sponsored by the Molecular and Systems Biology Specialty Section. Started at the 2018 SOT Annual Meeting, this mentoring reception has been a great success. Last year, 170 registered participants gathered to network with over 50 mentors in different sectors. Having attended this event for two years, Dr. Katelyn Lavrich, a postdoctoral fellow at the National Toxicology Program, said:

“The Mentoring Reception was a fantastic way to meet toxicologists across many sectors in a more personal setting. There was a great number of mentors at 2019 event, making it easy to have smaller and more personalized discussions. It was clear the organizers put a lot of work into the event! This was by far my favorite mentoring event of the SOT!”

The announcement of a 2020 Mentoring Reception will be available as the date gets closer, so please look out! I highly recommend all postdoctoral members to take advantage of these various opportunities and support provided by the Mechanisms SS.

Lastly, you can take a step further to get involved in the group by becoming a postdoctoral representative. If you have any questions about the position (or just anything!), please feel free to contact me (dahea.you@nih.gov). I look forward to seeing everyone at 2020 SOT Annual Meeting in Anaheim!
MESSAGE FROM YOUR GRADUATE STUDENT REPRESENTATIVE

Hey Everyone! My name is Emily Marques and I am the 2019/2020 Graduate Student Representative for the Mechanisms Specialty Section of SOT. I am a PhD candidate in Pharmacology and Toxicology program at the University of Rhode Island. I have attended the SOT conferences since 2015 and became a member the same year. As a Graduate Student Representative, I also serve on the SOT Graduate Student Leadership Committee (GSLC), which coordinates many activities to enhance the professional and scientific development of graduate student members. You can find resources, events, activities, and volunteering opportunities on the GSLC corner on the SOT website. We are currently planning many events for our Annual Meeting this upcoming March in Anaheim, California.

There are some great opportunities to connect with both industry and academia experts to assist you in networking and your career goals.

- The Student/Postdoctoral Mixer (Sunday evening of the SOT annual meeting)
- Chat with an Expert (Rolling registration during the months leading up to annual meeting)
- Tox Showdown (Tuesday evening of the SOT annual meeting)

Also, don't forget to apply to the numerous student travel and research awards and be sure to attend the mentoring reception, as outlined in the newsletter.

If you are interested in running for the Graduate Student Representative position in 2020/2021, please submit a nomination to sotmechanisms@gmail.com. You may also contact members of the Leadership Nominating Committee (James Luyendyk, Donna Zhang, and John Clarke) with any questions (see Pg. 8 for further details).

Awards and leadership positions are a great way to boost your resume and contribute to our scientific community. Apply today!

I look forward to seeing everyone in Anaheim at the Student/Postdoc Mixer, and feel free to reach out to me (2isaraemma@gmail.com) with any questions.
REQUESTING NOMINATIONS FOR 2020 CAREER ACHIEVEMENT AWARD

The Career Achievement award was created by the Mechanisms SS in 2014 and is announced each year at our Business Meeting and Reception in March. Past awardees have included Dean Jones (2014), Dennis Peterson (2015), Michael Gallo (2016), Steven Cohen (2017), Debra Laskin (2018), and Lois Lehman-McKeeman (2019).

Mechanisms SS members are encouraged to submit nominations for colleagues they wish to honor. Nominees must be a member of the Mechanisms SS and have made outstanding contributions to the field of mechanistic toxicology. All nominations will remain in consideration for 3 years.

To nominate a colleague:
Send a single PDF file of the required materials (below) to sotmechanisms@gmail.com. In the subject line include “Career_nomineelastname” to ensure processing.

- A current CV of the nominee
- Two letters of recommendation from members of Mechanisms SS outlining the nominees research accomplishments and service activities

For any questions regarding nominee eligibility or preparation of a nomination packet, please contact Rhiannon Hardwick (rhardwick@theravance.com).

SEEKING CANDIDATES FOR 2020 BALLOT

The continued success of the Mechanisms SS is driven by those willing to serve in leadership positions. Each fall we seek new volunteers, and have 4 positions available for the 2020/2021 term.

Self nominations are always welcome and encouraged! Interested applicants will be expected to provide a short bio and photo for the fall ballot. The bio should include your interest in serving in a position, current employment, and relevant leadership activities.

Any questions regarding nominee expectations and the duties each position entails may be directed to the Leadership Nominating Committee (James Luyendyk, Donna Zhang, and John Clarke).

Submit nominations (including self nominations!) to:
sotmechanisms@gmail.com