



2017 Mechanisms Specialty Section

Business Meeting and Reception

Society of Toxicology 56th Annual Meeting and ToxExpo

March 14, 2017



2017 Mechanisms Specialty Section Award Announcements

Sheldon D. Murphy Student Travel Award

Sheldon D. Murphy Student Travel Award (5-6 recipients)

- Est. in memory of Sheldon D. Murphy, Charter Member of SOT & 14th President
- Selections based on scientific quality of abstract & must be a PhD Candidate at time of Annual Meeting
- ~\$500 (specific amounts vary annually based on Endowment Award contributions)

Sheldon D. Murphy Student Travel Award

- **Kelly Fader, Michigan State University**

- *Hepcidin Deficiency, Systemic Iron Overloading, and Heme Accumulation in 2,3,7,8-Tetrachlorodibenzo-p-Dioxin-Elicited Hepatotoxicity*

- **Gopi Gadapudi, University of Iowa**

- *Diminished Phosphorylation of CREB is a Key Event in the Dysregulation of Glucuneogenesis, Glycogenolysis and Fatty Acid Oxidation in PCB126 Hepatotoxicity*

- **Cory Gerlach, Harvard Medical School**

- *MicroRNA-132 targets RASA1 and SOD2 in the kidney to increase tubular epithelial cell sensitivity to toxicity*

- **Nehal Gupta, Texas Tech University**

- *Penfluridol Reduces Paclitaxel Resistance in Breast Cancer by Inhibiting HER2/β-Catenin Signaling*

- **Madelyn Huang, University of North Carolina at Chapel Hill**

- *Inorganic arsenic and its methylated metabolites inhibit calcium influx and calcium-dependent mechanisms regulating glucose-stimulated insulin secretion in pancreatic islets*

- **Dahea You, Rutgers University**

- *Histone Modification is a Novel Epigenetic Mechanism to Up-Regulate Human Blood-Brain Barrier Transporters*

Sheldon D. Murphy Student Travel Award



Left to Right: Dahea You (Rutgers), Madelyn Huang (UNC), Nehal Gupta (Texas Tech), Cory Gerlach (Harvard), Kelly Fader (Michigan State), Gopi Gadapudi (Iowa)

Ronald G. Thurman Student Travel Award

Ronald G. Thurman Student Travel Award (3 recipients)

- Selections based on construction & quality of abstract & must be a graduate student SOT member
- ~\$500 (specific amounts vary annually based on Endowment Award contributions)

Ronald G. Thurman Student Travel Award

- **Diptadip Dattaroy, University of South Carolina**
 - *Spartolonin B Attenuates Liver Fibrosis Induced by Cyp2e1 Mediated Redox Toxicity in Obese Liver*
- **Ramiya Kumar, Clemson University**
 - *Cyp2b9/10/13-null mice are susceptible to diet-induced obesity*
- **Yu-Syuan Luo, Texas A&M University**
 - *Comparative Analysis of Toxicokinetics and Toxicodynamics of Trichloroethylene in Cytochrome P450 2E1 Knockout and Humanized Transgenic Mice*

Ronald G. Thurman Student Travel Award



Left to Right: Yu-Syuan Luo (Texas A&M), Diptadip Dattaroy (S. Carolina)

Not pictured: Ramiya Kumar (Clemson)

Postdoctoral Student Travel Award

Postdoctoral Student Travel Award (2 recipients)

- Postdoctoral scientists must submit abstract and personal statement with two supporting letters
- Applicants must be sponsored by a member of Mechanisms
- ~\$500 (specific amounts vary annually based on Endowment Award contributions)

Postdoctoral Student Travel Award

- **Kristin Bircsak, University of Pennsylvania**

- *Paternal Exposure to TCDD Distorts Embryo Sex Ratio and the Testicular Expression of Sex Determining Genes*

- **Jolyn Fernandes, Emory University**

- *Integration of Redox Proteomics, Metabolomics and Transcriptomic Analysis (RMT) Reveal Dynamic Oxidative Stress Responses to Manganese in Human SH-SY5Y Neuroblastoma Cells*

Postdoctoral Student Travel Award



Left to Right: Kristin Bircsak (Penn), Jolyn Fernandes (Emory)

Robert J. Rubin Student Travel Award

Robert J. Rubin Student Travel Award (2 recipients)

- Co-administered with Risk Assessment SS
- Presented by Risk Assessment in 2017
- Selections based on quality of abstract and application of mechanistic toxicology to risk assessment
- ~\$750 (specific amounts vary annually based on Endowment Award contributions)

Robert J. Rubin Student Travel Award

- **Yvonne Chang, Oregon State University**
 - *PAHs Differentially Regulate Transcription in Human 3D Bronchial Epithelium*

Robert J. Rubin Student Travel Award



Yvonne Chang (Oregon State)

Renal Toxicology Award

Renal Toxicology Award (3 recipients)

- Applicants may be graduate students or postdoctoral scientists
- Selections based on abstract, 300 word summary of work, and supporting letter from mentor/advisor
- ~\$250-1000 (specific amounts vary annually based on Endowment Award contributions)

Renal Toxicology Award

1st Place:

- **Priyanka Trivedi, Harvard Medical School**

- *Targeting Phospholipase D4 attenuates kidney fibrosis by modulating the immune system and activating proteases*

2nd Place:

- **Qian Lin, University of Louisville**

- *Fibroblast Growth Factor 1 Ameliorates Nephropathy Through an Anti-inflammatory Mechanism*

3rd Place:

- **Cory Gerlach, Harvard Medical School**

- *MicroRNA-132 targets RASA1 and SOD2 in the kidney to increase tubular epithelial cell sensitivity to toxicity*

Renal Toxicology Award



Left to Right: Cory Gerlach (Harvard), Qian Lin (Louisville), Priyanka Trivedi (Harvard)

Gabriel L. Plaa Education Award

Gabriel L. Plaa Education Award (3 recipients)

- Est. to honor the outstanding contributions of Gabriel L. Plaa
- Dr. Plaa was a notable researcher of chemical-induced liver injury, past SOT President, and leader in graduate student and post-graduate education and mentorship
- Applicants must be postdoctoral trainees and SOT members
- Applicants must submit a cover letter, abstract, CV, and two supporting letters
- Finalists are selected and asked to arrive at the Annual Meeting on Sunday for final interviews
- ~\$750-1500 (specific amounts vary annually based on Endowment Award contributions)

Gabriel L. Plaa Education Award

1st Place:

- **Gregory Smith, University of North Carolina at Chapel Hill**
 - *Loss of Mrp4 function disrupts lipid homeostasis and impairs liver regeneration following partial hepatectomy*

2nd Place:

- **Matt Dodson, University of Arizona**
 - *Arsenic, NRF2, and the mitochondrial network*

3rd Place:

- **Joseph Cichocki, Texas A&M University**
 - *Non-alcoholic fatty liver disease as a modifier of perchloroethylene-induced toxicity*

Gabriel L. Plaa Education Award



Left to Right: Matt Dodson (Arizona), Gregory Smith (UNC), Joseph Cichocki (Texas A&M)

Carl C. Smith Graduate Student Award

Carl C. Smith Graduate Student Award (3 recipients)

- Est. to honor the life and work of Carl C. Smith
- Applicants must submit cover letter, abstract, and personal statement along with two letters of support (mentor & department head)
- Finalists are selected and must submit a full manuscript of their submitted project for final judging
- ~\$750-2000 (specific amounts vary annually based on Endowment Award contributions)

Carl C. Smith Graduate Student Award

Finalists:

- **Kevin Baker, Michigan State University**
- **Emma Bowers, University of North Carolina at Chapel Hill**
- **Kelly Fader, Michigan State University**
- **Bryan Harder, University of Arizona**
- **Joseph Kochmanski, University of Michigan**
- **Dharmin Rokad, Iowa State University**
- **Abhishek Venkatratnam, University of North Carolina at Chapel Hill**
- **Dahea You, Rutgers University**

Carl C. Smith Graduate Student Award

1st Place:

- **Dahea You, Rutgers University**

- *Histone Modification is a Novel Epigenetic Mechanism to Up-Regulate Human Blood-Brain Barrier Transporters*

2nd Place:

- **Kelly Fader, Michigan State University**

- *Hepcidin Deficiency, Systemic Iron Overloading, and Heme Accumulation in 2,3,7,8-Tetrachlorodibenzo-p-Dioxin-Elicited Hepatotoxicity*

3rd Place (Tie):

- **Emma Bowers, University of North Carolina at Chapel Hill**

- *Modeling mechanisms of susceptibility in vitro: Differential activation of the MAP kinase ERK, but not p38, mediates variability and adaptation in the pro-inflammatory response to ozone*

- **Bryan Harder, University of Arizona**

- *Interaction between TSC22D4 and KEP1 promotes the NRF2-mediated cell response*

Carl C. Smith Graduate Student Award



Left to Right: Dahea You (Rutgers), Kelly Fader (Michigan State), Bryan Harder (Arizona), Emma Bowers (UNC)

Carl C. Smith Graduate Student Award



Left to Right: Joseph Kochmanski (Michigan), Kevin Baker (Michigan State), Dahea You (Rutgers), Kelly Fader (Michigan State), Bryan Harder (Arizona), Emma Bowers (UNC), Abhishek Venkatratnam (UNC)

Not pictured: Dharmin Rokad (Iowa State)

Mechanisms Career Achievement Award

- Enacted in 2014 to honor the contributions of an outstanding member to mechanistic toxicological research
- Nominations from Mechanisms membership are extremely important!

2014



Dean P. Jones
Emory University

2015



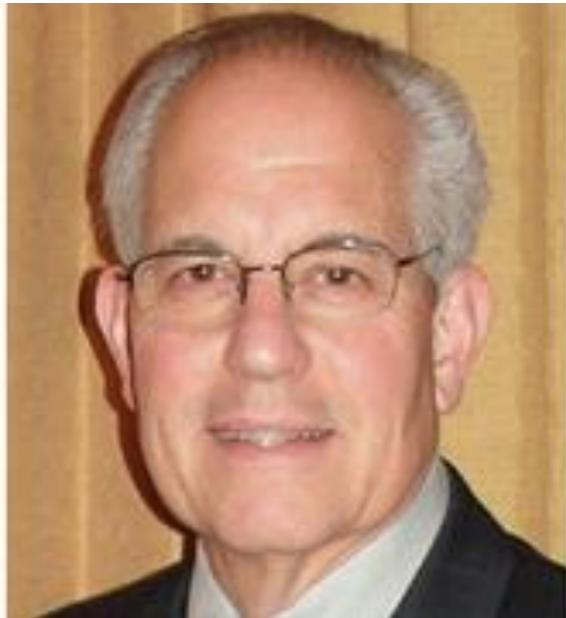
Dennis R. Petersen
University of Colorado

2016



Michael A. Gallo
Rutgers University

2017 Career Achievement Award



**Steven D. Cohen,
PhD, Fellow ATS**

- Leading researcher known for toxicology education and for shaping the careers of several current leaders in SOT and the Mechanisms Specialty Section
- As an educator at the University of Connecticut, founded the Center for Biochemical Toxicology and the Inter-departmental Graduate and Postdoctoral Research Training Program in Environmental Toxicology
- Served in numerous leadership positions within SOT, including President
- Multiple key findings that elucidated the mechanisms by which acetaminophen induced liver and kidney damage
- Contributed to understanding of covalent binding to target-organ toxicity