

MOUNTAIN WEST REGIONAL CHAPTER

ANNUAL REPORT: 2015-2016

May 1, 2015 to April 30, 2016

I. Officers/Committees:

<u>Officers</u>	<u>2014-2015</u>	<u>2015-2016</u>
President:	Todd Thompson	Yin Chen
Vice President:	Yin Chen	Jared Brown
Vice President Elect:	Jared Brown	Cassandra Rice
Secretary/Treasurer:	Karen Cooper	Karen Cooper
Past President	John Gregory Lamb	Todd Thompson
Councilors:	Jeff Angermann Brooke Tvermoes	Jeff Angermann Todd Thompson
PDA Representative:	Jonathan Shannahan	Jonathan Shannahan
GSLC Representative:	Bryan Harder	Bryan Harder
Junior Student Representative	Cameron McElroy	Sebastian Medina

II. Activities:

The 33rd Annual MWSOT Regional Chapter Meeting in Breckenridge, Colorado. The 33rd annual meeting was hosted by the University of Colorado in Breckenridge from September 23rd-25th at the Beaver Run Resort. More than 80 attendees participated in the meeting which included representation from the University of Arizona, University of Colorado, University of New Mexico, University of Utah, University of Nevada-Reno and Colorado State University. The meeting opened with a joint reception on Wednesday evening September 23rd with the American Association of Pharmaceutical Scientists (AAPS) Rocky Mountain Discussion Group. This reception allowed attendees from both organizations to meet and greet prior to the formal initiation of the meeting on September 24th. Many of the attendees of the AAPS stayed for the first day of the MWSOT regional meeting. Drs. Jared Brown (MWSOT vice president) and David Ross (Associate Dean for Research, University of Colorado) welcomed the attendees and introduced the theme of the meeting which was focused on “Systems Toxicology”. Dr. Brown gave an overview of the meeting schedule (see Appendix I). Dr. Dean Jones (Emory University) provided the keynote lecture entitled, “The Changing Landscape of Mechanistic Toxicology”. There were three plenary topics covered during the meeting and included (1) Transcriptomics/Genomics; (2) Metabolomics; (3) Proteomics/Bioinformatics. Each plenary session was chaired by a graduate student MWSOT member and included a speaker to introduce each topic. In addition, each plenary session included student and postdoctoral fellow presentations. A poster session was held from 4-6 pm on Thursday September 24th and a total of 24 posters were presented by a mix of faculty, students and postdoctoral fellows. Financial support for the meeting was provided by registration fees, SOT travel awards for students and the plenary speaker. Additional support for the meeting was provided by the Skaggs School of Pharmacy and Pharmaceutical Sciences at the University of Colorado, Charles River, Organovo, and Olympus.

Student and Postdoctoral Awards Presented at the 2015 MWSOT Regional Chapter Meeting:

Annual Garold Yost Award

Monica Sandoval-Johnson
(University of Colorado; Advisor: Dr. Jared Brown)

Best Oral Presentation

Elanie Wiest
(University of New Mexico; Advisor:

Sean Hammond
(Colorado State University; Advisor: Dr. Ron Tjalkens)

Best Poster Presentation

Cameron McElroy
(University of Colorado; Advisor: Dr. Brian Day)

Katriana Popichack
(Colorado State University; Advisor: Dr. Ron Tjalkens)



MWSOT officers and awardees from the regional chapter meeting in Breckenridge, CO.
Front (left to right): Jared Brown, Monica Sandoval-Johnson, Elanie Wiest, Katriana Popichack, Cameron Mcelroy, Jeff Angerman.
Rear (left to right): Sean Hammond, Todd Thompson, Cassandra Rice, Jonathan Shannahan, Karen Cooper.

Travel Award Recipients for Attendance to the MWSOT Regional Meeting: Supplemental funding for student travel to the regional chapter meeting was kindly provided through SOT. Student recipients for this funding include representation from the University of New Mexico, University of Utah, and the University of Arizona. The students receiving awards were Mario Aragon, Aram Cholanians, Bryan harder, Molly Harmon, Juliana Huestis, Nitesh Kunda, Sebastian Medina, Jennifer Ong, Dominique Price, Elani Wiest, Huan Xu and Kayla Zehr.

2016 SOT Annual Meeting Reception was a joint reception with the Southern California Regional Chapter of SOT and was held in New Orleans, LA at the Angela King Gallery on Tuesday March 15th from 6-9 pm. The reception was well attended by members of the MWSOT including the University of Arizona, University of Colorado, University of New Mexico, University of Utah, University of Nevada Reno, Colorado State University, and New Mexico State University. The gathering was very productive and provided members of MWSOT to interact with not only their counterparts in the region but also Southern California regional members including many industry contacts such as Organovo. Food, drink and entertainment was provided through the reception.

Other Regional Chapter Activities 2015-2016:

The poster shown below was exhibited at the 55th Annual SOT meeting in New Orleans, LA. presenting information on the mission of the MWSOT and factual information about the organization.

Mountain West Society of Toxicology Regional Chapter



and training throughout the southwest

The MWSOT has been in existence for over 30 years, since 1984! The main functions of the chapter are to 1) foster and support southwest regional toxicologists' initiatives and collaboration and 2) to provide a training resource to our graduate students and young postdoctoral fellows. These goals are primarily achieved through the MWSOT Annual Meeting, locations of which rotate through the main academic centers of Arizona, Colorado, New Mexico and Utah. The meeting is held over 1-2 days with topics focused on regional toxicology interests and issues. A full slate of scientific speakers (national, international and local experts) is complemented by research platform and poster presentation venues for students and postdoctoral fellows. To provide incentive for trainees, awards are given to top performers. Any national or international scientist or student with toxicology interests are encouraged to attend the MWSOT annual meeting! The 2016 meeting will be held in Salt Lake City, Utah.

MWSOT FAST FACTS

Established in 1984

Memberships:

- Total Members: 102
- Full: 58
- Associate: 9
- Postdoctoral: 9
- Student: 20
- Emeritus: 1

Diversified Membership:

- 45% Academic/ 8% Research Institute/ 8% Industry, 14% Consulting, 3% Government, 22% Other

Geography:

Largest Geography of the Regions: **Arizona, Colorado, New Mexico, Utah, Nevada, Wyoming, and Southern Idaho**

CURRENT OFFICERS

President: Yin Chen, PhD, University of Arizona
 Vice President: Jared M. Brown, PhD, University of Colorado
 Vice President-elect: Cassandra Deering-Rice, PhD, University of Utah
 Secretary/Treasurer: Karen Cooper, PhD, University of New Mexico
 Past President: Todd Thompson, PhD, University of New Mexico
 Councilors: Todd Thompson, PhD, University of New Mexico
 Jeff Angermann, University of Nevada, Reno

Postdoctoral Representative: TBD
 Senior Student Representative: TBD
 Junior Representative: TBD

MWSOT MEETING FACTS

- Meeting annually in September or early October
- Regional, National and International toxicology topics of interest
- Nationally-known and local speakers
- Rotates yearly through beautiful southwest locations in Arizona, Colorado, New Mexico and Utah / Southern Idaho
- Platform and presentation venues for graduate students and postdoctoral fellows

Primary Chapter Focus:

Student and Postdoctoral Training through the Annual Regional Chapter Meeting

MAJOR CONTRIBUTORS TO REGIONAL CHAPTER

The Mountain West chapter encompasses the beautiful state of Arizona, Colorado, Utah, Southern Idaho, Nevada, New Mexico and Wyoming.

Academic Institutions: Colorado State University, Fort Lewis College, Idaho State University, New Mexico State University, Northern Arizona University, University of Arizona, University of Colorado, University of Nevada, University of New Mexico, University of Northern Colorado, University of Utah, University of Wyoming, Utah State University

Non-Academic Institutions and Industry: Array BioPharma, Inc. (CO), Century Environmental Hygiene (CO), Covance Laboratories (AZ), EP Hays Toxicology Services (CO), Fairbrothers Toxicology (CO), Front Range Environmental Toxicology Services (CO), Los Alamos National Laboratory (NM), Lovelace Respiratory Research Institute (NM), National Jewish Research Institute (CO), Poisonous Plant Research Laboratory (UT), Rocky Mountain Poison Center (CO), Shopp Nonclinical Consulting (CO), Summit Toxicology (CO), Technikos Research Associates (AZ), Woven Egg Consulting (CO)

ANNUAL CHAPTER MEETING TOPICS AND LOCATIONS

- 2016 TBD — Salt Lake City, UT
- 2015 Systems Toxicology — Breckenridge, CO
- 2014 Microbiome and Gene-Environment Interactions — Tucson, AZ
- 2013 Nanotoxicology — Albuquerque, NM
- 2012 Environmental Toxins and Regulation (Federal, not genetic) — Salt Lake City, UT
- 2011 Oxidative Stress, Inflammation and Human Disease — Breckenridge, CO

STUDENT AWARDS

Barrett Van Praeger Student Award
 Award recognizes postdoctoral trainees who exhibit exceptional interest and aptitude in toxicology through participation in regional chapter activities.

MWSOT Student Travel Award
 Student from outside state receives the award to receive travel expenses to attend the MWSOT Annual Meeting for either to attend as a speaker, presentation, or to attend as a student.

MWSOT Postdoctoral Platform and Poster Presentation Awards
 Available to postdoctoral students working in a research laboratory of a member of the Mountain West Region Chapter.



REGIONAL CHAPTER INITIATIVE AND ACHIEVEMENTS

- Addition of "Industry and Career Perspectives" component to Regional Meeting
- Industry speakers speak about scientific topics in industry and career potentials for toxicologists
- Increase Industrial and Consulting Participation
- Collaborative National Receptions with Southern California Chapter of SOT (primary industry membership)

MWSOT Postdoctoral Platform and Poster Presentation Awards
 Available to postdoctoral students working in a research laboratory of a member of the Mountain West Region Chapter.

<http://www.toxicology.org/sect/sectwest/index.asp>

III. Appendix I – Agenda for the 33rd Annual MWSOT Regional Chapter Meeting:

Meeting agenda:

Wednesday, September 23rd, 2015

6:00 – 8:00 pm Registration Open- *Floor 1 Foyer South*

6:00 – 9:00 pm **Reception (joint with AAPS Rocky Mountain Discussion Group)- *Peak 14***

Thursday, September 24th, 2015

7:30 – 8:30 am Registration Open- *Floor 1 Foyer South*

7:00 – 8:30 am **Continental Breakfast- *Peak 17***

8:30 – 8:40 am **Opening comments** – Dr. David Ross, Associate Dean for Research, School of Pharmacy, U. of Colorado Anschutz Medical Campus

8:40 – 8:50 am **Meeting Introduction** – MWSOT President Yin Chen & Vice-President Jared Brown

8:50 – 9:50 am **Keynote Speaker** - Dean Jones, Ph.D., Emory University – ***“The Changing Landscape of Mechanistic Toxicology”***

9:50 – 10:00 am **Break**

10:00 – 12:00 pm **Plenary Topic I: Transcriptomics/Genomics**
(Session chair: Monica Sandoval-Johnson)

10:00 – 10:30 Scott Burchiel, U. New Mexico – ***“Analysis of Human Upper Airway Bacterial and Viral Microbiomes to Assess Immune Function Following Environmental Exposures”***

- 10:30 – 11:00 Christopher Reilly, U. Utah – “Activation of TRPV3 by Wood Smoke Particulate Material and Associated Consequences to Lung Epithelial Cells”
- 11:00 – 11:30 Richard Radcliffe, U. Colorado – “Genetics and Genomics in the Laboratory Mouse Applied to the Study of Human Alcoholism”
- 11:30 – 12:00 Ting Wang, U. Arizona – “Myosin Light Chain Kinase Mediates Particular Matter Exacerbated Asthma, an Example with Genomic Approaches”
- 12:00 – 1:30 pm **Lunch on your own**
- 1:30 – 2:00 pm Todd Thompson, U. New Mexico – “Systemic Screening of Metal-Induced Metallothionein Expression Profiles Altered by Uranium”
- 2:00 – 3:00 pm **Plenary Topic II: Metabolomics** (Session chair: Ross Osgood)
- 2:00 – 2:30 Nichole Reisdorph, U. Colorado – “Translational Metabolomics and Genomics and Chronic Obstructive Pulmonary Disease Research”
- 2:30 – 3:00 Svenja Heischmann, U. Colorado – “Metabolomic Biomarker Discovery in Experimental Temporal Lobe Epilepsy”
- 3:00 – 3:15 Break
- 3:15 – 4:00 pm **Student Presentations - Peak 17**
- 3:15 – 3:30 Elani F. Wiest, U. New Mexico – “N-3 PUFAS Protect Against Cigarette Smoke-Induced Vascular Dysfunction”
- 3:30 – 3:45 Claire Heit, U. Colorado – “Modifications in Catalase and CYP2E1 Correlate to Decreased Alcohol Drinking Preference”
- 3:45 – 4:00 Sean Hammond, Colorado State University – “A Novel Small Molecule Activator of the Nuclear Receptor NURR1 (NR4A2) Promotes a Dopaminergic Phenotype in Neuron Cultures and Protects Against Neurotoxicity in a Mouse Model of Parkinson’s Disease”
- 4:00 – 6:00 pm **Poster Session / Mixer**

Friday, September 25th, 2015

- 7:00 – 8:30 am Continental Breakfast- *Peak 17*
- 8:30 – 9:30 am **Student/Postdoc Presentations - *Peak 17***
- 8:30 – 8:45 Valerie Minarchick, U. Colorado – “Injected Cerium Dioxide Nanoparticles Display Anti-Oxidant Activity in Spontaneously Hypertensive Rats”
- 8:45 – 9:00 Bryan Harder- U. of Arizona – “Upregulation of NRF2 by TSC22D4 Confers Chemoresistance to Medroxyprogesterone Acetate (MPA) in Type 1 Endometrial Carcinoma”
- 9:00 – 9:15 Aram Cholanians, U. Arizona – “Role of Arsenic in the Oligomerization of Alpha-Synuclein: Implications in Parkinson’s Disease”
- 9:15 – 9:30 Ross Osgood, U. of Colorado – “Toxic Effects of Polycyclic Aromatic Hydrocarbon Mixture Exposure in Lung Cell: A Role for Inflammation and the P38 MAPK Pathway”
- 9:30 – 10:00 am **Break** and Award Committee Meeting
- 10:00 – 12:00 pm **Plenary Topic III: Proteomics/bioinformatics**
(Session chair: Cameron McElroy)
- 10:00 – 10:30 Yin Chen, U. Arizona – “CC16 Protects Against Pulmonary Dysfunctions: A Discovery by the Proteomic Analysis of Historical Samples”
- 10:30 – 11:00 Jonathan Shannahan, U. Colorado – “Formation of the Nanoparticle-Biocolon and its Toxicological Implications”
- 11:00 – 11:30 Laurie Hudson, U. of New Mexico – “Determinants of Arsenic Binding to Zinc Finger Proteins in DNA Repair”
- 11:30 – 12:00 Laura Saba, U. Colorado – “Systems Genetics Tools for Integrating Omics Data and Identifying Susceptibility Pathways”
- 12:00 – 12:30 pm **Awards Presentation and Closing**