

NAME OF SPECIALTY SECTION Neurotoxicology

ANNUAL REPORT: 2015-2016

May 1, 2015 to April 30, 2016

I. Officers/Committees:

<u>Officers</u>	<u>2015-2016</u>	<u>2016-2017</u>
President:	William K Boyes	Abby A Li
Vice President:	Abby A Li	Mary E Gilbert
Vice President-Elect:	Mary E Gilbert	Michelle L Block
Secretary/Treasurer:	Ronald B Tjalkens	Ronald B Tjalkens
Past President	Aaron B Bowman	William K Boyes
Councilors:	Mamta V Behl	Mamta V Behl
	Michelle L Block	Helen J. K. Sable
PDA Representative:	Kiran Dhakal	Marissa Sobolewski
GSLC Representative:	Megan Elizabeth Culbreth	Megan Elizabeth Culbreth

II. Activities:

2016 SOT Annual Meeting Reception was held in New Orleans, Louisiana on March 14.

Approximately 200 people were in attendance.

Dr. Boyes called the meeting to order at 6:30 AM on 3/14/2016.

Meeting Minutes: (see Attachment I). An agenda from the NTSS Business meeting is attached. Two actions items included:

- We discussed our experience with the first annual NTSS Toshio Narahashi Trainee Conference Award. It was a consensus that the process needed to start earlier next year in order for the award checks to be issued sufficiently ahead of the annual SOT meeting, thereby allowing the recipients to actually use the funds for their intended purpose. The competition also needs to be more widely advertised in order to attract a larger pool of applicants. In general, however, we were pleased that the award process had been initiated this year and successfully concluded.
- We decided to eliminate the NTSS Facebook page and instead focus on the SOT website for NTSS outreach

Awards:

Recipients of the first annual NTSS Toshio Narahashi Trainee Conference Award were:

- Jasmine Brown – US EPA. Further Evaluation of Developmental Neurotoxicity (DNT) Hazard Screening using Neural Networks from Rat Cortical Neurons on Multi-well Microelectrode Arrays. Mentor: Tim Shafer
- Marshall Edwards - U Texas, San Antonio. Early Juvenile Exposure Of Mice To High-dose Acetaminophen Confers Elevated Serum Eotaxin Levels And Sociability Impairments In Adulthood. Mentor: Georgiana Gould
- Dana Laurenstein, NYU School of Medicine. E-cigarette Exposure Induces Neuro-alterations In Mice Exposed During Early Life. Mentor: Judith Zelikoff

The 2016 NTSS Toshio Narahashi Graduate Student Poster Award competition was chaired by Dr. Arron Bowman and featured 22 graduate student and 10 postdoctoral student entrants. The posters were judged by 35 volunteer judges drawn from the NTSS membership. Judging took place in a two stage competition first involving evaluation and scoring of extended abstracts, and second, in-person presentations of the posters which occurred Monday afternoon of the SOT meeting.

Winners of the 2016 Toshio Narahashi Poster Competition: Graduate Students were:

1. Katriana Popichak, Colorado State University, Fort Collins. Activation Of The Nuclear Receptor Nur77 By A Novel Diindolylmethane Analog Suppresses Inflammatory Gene Expression In Primary Astrocytes Mentor: Ronald Tjalkens.
2. Miles Bryan, Vanderbilt University. A potential role for phosphotidyl-inositol-3-kinase (PI3K) in regulating manganese transport through an autophagy-mediated mechanism Mentor: Aaron Bowman
3. Shivani Ghaisas, Iowa State University. Chronic exposure to manganese causes selective changes in the enteric nervous system and gut physiology leading to altered nutrient metabolism and intestinal motility Mentor: Anumantha Kanthasamy

Winners of the 2016 Toshio Narahashi Poster Competition: Postdoctoral Students were:

1. Briana Miranda, Univ. Pittsburgh Astrocyte specific expression of DJ-1 attenuates rotenone-induced neurotoxicity; a gene therapy approach. Mentors: Edward Burton and J. Timothy Greenamyre
2. Marissa Sobolewski, Univ. Rochester. Developmental Mismatch between Fetal and Adult Steroid Concentrations: Enhanced Hormonal Dysregulation in Adult Mice Maternal Exposed to a Mixture of Low Dose Endocrine Disrupting Chemicals Mentor: Deborah Cory-Slechta.
3. Kim Keil, Univ. California Davis. DNA Methylation As A Mediator Of 2,2',3,5',6-Hexachlorobiphenyl (PCB 95) Induced Dendritic Arborization Mentor: Pam Lein

2016 SOT Annual Meeting Courses/Sessions: NTSS sponsored the following sessions at the 2016 SOT Meeting

2016	Mitochondrial Dysfunction As a Pathogenic Mechanism and Therapeutic Target for Neurodegenerative Diseases
2016	Patient-Specific Stem Cells as Models for Gene, Drug, and Environment Interactions in Disease
2016	Reciprocal Synergism: New Insights into Thyroid Hormone Action in Brain Development and Neurodevelopmental Toxicity
2016	The Role of Gene SLC30A10 on Manganese Homeostasis and Functional Outcomes: Implications for Homeostasis and Neurotoxicity
2016	Use of the Adverse Outcome Pathway (AOP) Concept to Link Epidemiological to Mechanistic Data on the Correlation of Pesticide Exposures and Parkinson's Disease
2016	Are Dietary Exposures to Heterocyclic Amines a Potential Risk Factor for Neurological Disease?
2016	Mitochondria as a Central Target of Environmental Contaminants, Pharmaceutical Agents, and Toxicants: Mechanisms of Toxicity and Disease
2016	Nanotoxicology and Ocular Drug Delivery: One Size Does Not Fit All
2016	Screening Chemicals for Neurotoxicity Outcomes—Using Large Datasets and Multiple Endpoints to Develop "Toxicity Profiles"
2016	Transient Receptor Potential A1 (TRPA1) Cation Channels: Fluttering Hearts, Headaches and Hot Flashes, Can One "Environmental Sensor" be the Cause of All the Pain?

Endowment Fund Details: Toshio Narahashi Neurotoxicology Fellowship Endowment Fund

- Steward: Pam Lein
- New SOT Endowment target: \$50,000
- As of SOT 2016 numbers we had raised: \$67,750
- Institutional Contributions:
 - NeuroToxicology
 - International Neurotoxicology Association (INA)
 - Oklahoma State University
- Corporate Sponsors
 - Zoetis
 - Charles Rivers
 - Elsevier

Newsletter:

- NTSS produced a newsletter in the fall of 2015
- http://www.toxicology.org/groups/ss/NTSS/doc/NTSS_NL_Nov15.pdf

Contributions to SOT website:

- NTSS contributions to the SOT website were maintained by our graduate student and postdoctoral representatives, Megan Culbreth and Kiran Dhakal

Other Specialty Section 2015-2016 Activities:

- This year NTSS instituted a new travel award using the Toshio Narahashi Endowment fund to help support travel expenses for graduate students and postdoctoral fellows. A competition was held in December of 2015, and three winners were selected as noted above.

2016 NTSS had highest number of total SOT sessions (10) since records began in 2011 _



