

A banner for the Neurotoxicology Specialty Section. On the left is a stylized illustration of a human head in profile, facing right, with a glowing red brain and blue neural pathways extending from it. The background is a complex, blue, wireframe-like pattern. The text "Neurotoxicology" is in a large, bold, yellow font with a 3D effect, and "Specialty Section" is in a slightly smaller, bold, yellow font with a 3D effect, positioned below the main title.

Neurotoxicology Specialty Section

October 11, 2012

Dear NTSS Members:

Hopefully this finds you all recovered from the rush of submitting abstracts for the upcoming 2013 SOT meeting! As we begin to prepare for that meeting in San Antonio, the NTSS Executive Committee would like to briefly recap some highlights from the 2012 SOT meeting in San Francisco and bring you up to date on a number of exciting developments within NTSS since the 2012 SOT meeting.

The Dr. Toshio Narahashi Neurotoxicology Fellowship Award Fund: In recognition of the valuable contributions of Dr. Toshio Narahashi to neurotoxicology research and his commitment to the training of neurotoxicologists, the NTSS leadership has obtained permission from SOT Legal Counsel to rename the Endowment initiated at the 2011 Annual Meeting in honor of Dr. Narahashi. To recognize Dr. Narahashi's achievements in neurotoxicology, and to support the training of future neurotoxicologists, please consider contributing to this important fund. The proceeds from the endowment will be used to fund awards provided by NTSS to support and encourage graduate students and postdoctoral fellows engaged in neurotoxicology research. We need to reach \$25,000 in the upcoming year in order for the Fund to convert to a Permanently Restricted Net Asset Fund, and currently we are far short of that goal. **WE NEED YOUR contributions (which are tax-deductible) to make this a reality!** Click on <http://www.toxicology.org/ai/csot/contribute.asp> to access the Endowment Fund Donor Form. **Be sure to select Toshio Narahashi Neurotoxicology Fellowship Award under named funds.**

The NTSS Poster Competition: *See below for changes to next year's competition.* The predoctoral and postdoctoral poster competition at the 2012 SOT meeting was truly impressive. There were a large number of posters (18 predoctoral and 8 postdoctoral), and all contestants are to be congratulated for their professional presentations. Congratulations to the following trainees who were selected to receive awards:

Predoctoral Student Poster Awards:

1st Place: Kristen Ryan, University of Colorado – *Post-translational oxidative modification and inactivation of mitochondrial complex I in kainate neurotoxicity* (Mentor: Manisha Patel)

Kristen Ryan is a senior graduate student in the Department of Pharmaceutical Sciences and Toxicology Program at the University of Colorado Anschutz Medical Campus. Her thesis work has focused on the role that oxidative and nitrosative stress plays in the progression of acquired epilepsies, such as temporal lobe epilepsy (TLE). At the SOT meeting in San Francisco, Kristen was nominated for the Carl C. Smith Award in the Mechanisms Specialty Section and also received first place in the NTSS predoctoral poster competition. The work presented in her poster described the identification of Complex I as a target of metal-catalyzed carbonylation (a biomarker of oxidative stress) and utilized mass spectrometry to identify the sites and nature of carbonylation. This work was recently published in the *Journal of Neuroscience* (J Neurosci. 2012 Aug 15;32(33):11250-8).

2nd Place: Sandra Losa-Ward, North Carolina State University – *Advancement of vaginal opening in the female rat following neonatal BPA exposure is associated with disruption of hypothalamic RFRP3 signaling pathways* (Mentor: Heather Patisaul)

Sandra Losa-Ward is originally from Germany and is currently a fourth year PhD student in the lab of Dr. Heather Patisaul in the Department of Biology at North Carolina State University. The research in Dr. Patisaul's lab focuses on the effects of neonatal exposure to endocrine disrupting compounds (EDC) on the development of the hypothalamic-pituitary-gonadal axis. Sandra's research, in particular, focuses on the effects of EDC exposure on pubertal timing in female rats and she is working to elucidate the underlying mechanisms involved in pubertal onset. At the 2012 SOT meeting Sandra was awarded second place in the graduate student poster competition of the NTSS for her work demonstrating that in female rats neonatally exposed to Bisphenol A, advanced vaginal opening was observed in the animals exposed to a low dose of BPA. Assessing the RFamide system in the hypothalamus showed decreased RFamide related peptide 3 (RFRP3) fibers, cell numbers and contacts on Gonadotropin Releasing Hormone (GnRH) neurons at the time of pubertal onset. Since RFRP3 inhibits GnRH release, these findings suggest that an early release of GnRH inhibition could drive early vaginal opening.

3rd Place: Dilshan Harischandra, Iowa State University – *Human α -synuclein protects against manganese neurotoxic insult during the early stages of exposure in a dopaminergic cell model of Parkinson's disease* (Mentor: Anumantha Kanthasamy)

Dilshan Harischandra is a second year Toxicology graduate student at Iowa State University. Dilshan's research focuses on the interactions between divalent manganese interaction and α -synuclein and prion proteins to promote prion-like propagation of protein aggregation, which may contribute to the progression of neurodegenerative processes in Parkinson disease models. Dilshan took third place for his poster entry in the NTSS graduate student poster competition for work showing neuroprotective effects of the human α -synuclein protein against manganese neurotoxic insult during early stages of exposure in a dopaminergic cell culture model of Parkinson's Disease.

Postdoctoral Poster Awards:

1st Place: Huajun Jin, Iowa State University – *Increased expression of pro-apoptotic kinase PKC δ during manganese exposure: Implications for gene-environment interactions in neurodegeneration* (Mentor: Anumantha Kanthasamy)

Dr. Huajun Jin received the BS degree in Biochemistry in 2000 from Jilin University, China, the MS degree in Biophysics in 2003 from the Institute of Biophysics, Chinese Academy of Sciences, China, and the PhD degree in Molecular, Cellular, and Developmental Biology from Iowa State University in 2010. He is currently working as a staff scientist at the Iowa Center for Advanced Neurotoxicology in the Biomedical Sciences Department at Iowa State University. His research interests focus on the molecular and cellular mechanisms underlying dopaminergic neurodegeneration in Parkinson's disease, especially the contributions of gene-environment and epigenetic-environment interactions in sporadic Parkinson's disease. Dr. Huajun Jin received a first place award in the post-doctoral category from both NTSS and the Metals Specialty Section. The study presented in his poster provides experimental evidence of a new link between the environmental neurotoxin manganese and apoptotic PKC-delta gene, and may have implications for the development of new translational strategies against manganese-associated neurotoxicity. A part of this work was published in JBC. 2011, 286:19840-59.

2nd Place: Kirstie Stansfield, Columbia University – *NMDA receptor-dependent BDNF-TrkB signaling and MeCP2 changes in developing hippocampal neurons by Pb²⁺: Implications for an environmental basis of neurodevelopmental disorders* (Mentor: Tomas Guilarte)

Kirstie Stansfield received her MA and PhD from the University of South Florida in 2007 and accepted a postdoctoral research scientist position at Johns Hopkins University in Baltimore, MD prior to moving to Columbia University in New York City. Currently, her work utilizes high-powered fluorescent microscopy, western blotting, ELISA and PCR to examine the effect of lead exposure on the developing brain. Her poster focused on the signaling pathways involved in the production of brain-derived neurotrophic factor, a chemical critical for the creation of new synapses in the hippocampus, the brain's center for memory and learning.

3rd Place: Lana Shaiba, Albany College of Pharmacy and Health – Biphase effects of lead on angiogenesis (AG): Implications for developmental neurotoxicity (Mentor: Hassan El-Fawa)

Dr. Lana Shaiba is a physician who recently finished her master's degree in biotechnology at the Albany College of Pharmacy and Health Sciences. She was involved in research on the effects of neurotoxins on angiogenesis as well as developing diagnostic biomarkers of hypoxic-ischemic encephalopathy. Dr. Shaiba recently started a Pediatric Residency at the University of British Columbia in Vancouver, Canada.

Sincere thanks also to the judges who had the difficult task of identifying the winners:

Chair: Stephen Lasley (University of Illinois)

Predoctoral Judges: Aaron Bowman (Vanderbilt University), Chris Curran (Northern Kentucky University), Marion Ehrich (Virginia Tech), Paul Eubig (University of Illinois), Vanessa Fitsanakis (King College), Mary Gilbert (US EPA), David Herr (US EPA), Sue Marty (Dow Chemical), Diane Miller (CDC-NIOSH), Chris Newland (Auburn University), Jason Richardson (UMDNJ-Rutgers), Jim Romano (SAIC), Sue Schantz (University of Illinois), Chris Toscano (FDA), Henrik Viberg (Uppsala University)

Postdoctoral Judges: Phil Bushnell (US EPA), Nick Filipov (University of Georgia), Jim O'Callaghan (CDC-NIOSH), Jay Schneider (Thomas Jefferson University), Rich Seegal (NYSDOH, Wadsworth Center)

NTSS Poster Competition for the 2013 SOT meeting:

CHANGES: To provide more feedback to the trainees and to streamline the review process we are implementing a new judging procedure for the NTSS poster competition at the 2013 SOT meeting. This year we will be requiring that an extended abstract be submitted 2 weeks before the national meeting. The extended abstract will consist of the abstract originally submitted to SOT, a 2-4 sentence description of the impact of the research, up to one page of key figures or data, and a 3-5 sentence conclusion (total of 3 pages). The extended abstracts will be reviewed by a committee prior to the meeting and will comprise 50% of the score. The remaining portion of the score will be based on the face-to-face interviews at your posters on Monday late afternoon. At this point we anticipate at least 3 judges will evaluate each poster. More detailed information will be posted on the NTSS website:

<http://www.toxicology.org/isot/ss/NTSS/awards.asp>.

Eligibility requirements for the NTSS poster competition: (1) Graduate students and postdoctoral research fellows/associates must be in attendance at the 2013 Annual Meeting; (2) the trainee must be a student or postdoctoral member of SOT and NTSS (or show evidence of application) and meet the SOT criteria for classification as a graduate student or postdoctoral fellow at the time of the Annual Meeting. Graduate students or postdocs giving platform presentations at the Annual Meeting are also eligible if they prepare a poster summarizing their talk. Advisors or mentors who are not members are strongly encouraged to join NTSS.

Submission requirements: (1) An extended abstract as defined above (3 pages); and (2) a letter of support from the graduate student's advisor or postdoctoral mentor outlining the independence and role of the candidate in the research must be submitted to **Gary Miller (gary.miller@emory.edu)**, Chair of the NTSS Student and Postdoctoral Awards Committee by **February 25, 2013**. Participants will also be required to send a **PDF of their complete poster to Dr. Miller by March 4, 2013** to facilitate the judging (this presubmission of the poster need not be the final version presented at the 2013 Annual Meeting).

In addition to recognition plaques for each winner, monetary prizes will be awarded for first, second and third place. Winners will be announced at the annual NTSS Business Meeting in San Antonio.

NTSS members interested in judging either extended abstracts and/or posters should contact **Gary Miller (gary.miller@emory.edu)**.

Upcoming Election of NTSS Officers – Call for Nominations: Early in 2013, NTSS will elect a Councilor and a Vice President-Elect plus graduate student and postdoctoral representatives. It is time to gather nominations for candidates to run for those offices. Steve Lasley will Chair the Nominating Committee this year as the past Past-President, and requests your suggestions. Please consider carefully your nominations – no particular expertise is required of candidates, but they should be dedicated to service for NTSS. Remember that the future success of the Specialty Section will be dependent on these people. It is best if the nominator knows the candidate is willing to serve, but the Chair and other Nominating Committee members will make those contacts. Self-nominations are welcome. **Please forward the names and contact information of all nominees to Steve Lasley (SML@uic.edu or 309-671-8529) by November 1, 2012.**

New look for NTSS website!

Check out the updated and upgraded NTSS website at: <http://www.toxicology.org/isot/ss/NTSS/index.asp>. Councilors Chris Curran and Chris Toscano, along with postdoctoral representative Paul Eubig and graduate student representative Josh Allen, reviewed the site content and worked with Web developers at SOT HQ to overhaul the site design. Below is the new home page banner for the website:



You can find information on the 2013 NTSS awards, tips for submitting program ideas for the Annual Meeting, and helpful links to neurotoxicology meetings and resources. We hope you find the site attractive and easy to use. We welcome your feedback and thoughts on additional resources to add. **[Send comments to curranc1@nku.edu](mailto:curranc1@nku.edu)**.

Join the Student & Postdoc Facebook Group!

A new Facebook group has been created for NTSS Students and Postdoctoral Fellows by the current NTSS graduate student representative Josh Allen (University of Rochester).

Join today by going to: www.Facebook.com/groups/117643265035584.

Everyone can “like” NTSS on Facebook at www.Facebook.com/neurotoxicology



Meeting of potential interest to NTSS members:

On 9-13 June 2013, the 14th International Neurotoxicology Association Meeting 'Neurodevelopmental Basis of Health and Disease' will be held in the Netherlands. The following topics will be discussed during this conference: Developmental neurotoxicity, Alternative methods and animal 3Rs, Neuroendocrine toxicity, Metabolic syndrome and CNS diseases, New (*in vivo*) approaches in neuropathology, Translational neurotoxicology and Neurotoxicity of nanoparticles. For more information please go to the conference website: www.INA14.org or contact the conference secretariat: INA@bastiaanse-communication.com.



NTSS-related events at the 2013 SOT Annual Meeting:

The NTSS Business Meeting and Reception will be held **Tuesday, March 12 from 6-7:30 pm**. Please mark your calendars and plan to attend, enjoy food and drink while visiting with your NTSS colleagues. A short business meeting will be held at approximately 6:45 PM. If you have an item for the business meeting agenda, please contact **Pam Lein** (pjlein@ucdavis.edu).

NTSS was very successful this year in obtaining acceptance from the SOT Program Review Committee for NTSS-sponsored programs in the 2013 Annual Meeting. The pre-review team of Dr. Gary Miller (NTSS Past President), Pam Lein (NTSS President) and Anu Kanthasamy (NTSS Vice President) provided feedback on initial proposals submitted to NTSS for sponsorship. Final proposals were evaluated and ranked by an NTSS committee including Pam Lein, Stephen Lasley (University of Illinois), Bob MacPhail (US EPA) and Carey Pope (Oklahoma State University). In total, NTSS sponsored 4 symposium, 1 workshop and 1 continuing education (CE) proposals and endorsed 8 symposium, 4 workshop, 2 CE and 1 Roundtable proposals. Of those NTSS-sponsored proposals, the following were accepted for the 2013 Annual Meeting:

Symposium: *Air pollution as a risk factor for CNS diseases and disorders*. Chairs: **Cory-Slechta** (University of Rochester) and **Block** (Virginia Commonwealth University)

Symposium: *The dynamics of neuroinflammation and inflammatory cell responses in neurologic disease*. Chairs: **Harry** (NIEHS) and **Curran** (Northern Kentucky University)

Workshop: *Environmental Factors in Neurodegenerative Diseases*. Chairs: **Castiglioni** (Texas A&M) and **Kanthasamy** (Iowa State University)

CE: *The practice and implementation of neural stem cell based approaches to neurotoxicology*. Chairs: **Shafer** (US EPA) and **Bowman** (Vanderbilt University)

Congratulations to the Chairs of these successful proposals and thank you to the individuals who participated in the proposal review process.

So, in closing, please check out the new NTSS website, fill out and send in your donor form for the Dr. Toshio Narahashi Neurotoxicology Fellowship Award Fund (click <http://www.toxicology.org/ai/csot/contribute.asp> to access the Endowment Fund Donor Form), and continue making great discoveries in Neurotoxicology!

Pamela J. Lein, PhD
President, NTSS