

NANOTOXICOLOGY SPECIALTY SECTION

ANNUAL REPORT: 2016-2017

1 May 2016 - 30 April 2017

I. Officers/Committees:

Officers	2015-2016	2016-2017
President:	James Christopher Bonner	Robert L Tanguay
Vice President:	Robert L Tanguay	Timothy R Nurkiewicz
Vice President-Elect:	Timothy R Nurkiewicz	Aaron Erdely
Secretary/Treasurer:	Brian D Thrall	Brian D Thrall
Past President	Saber M Hussain	James Christopher Bonner
Councilors:	Jared M Brown	Tara Sabo-Attwood
	Tara Sabo-Attwood	Joel M Cohen
PDA Representative:	Anurag Mishra	Donald Anderson
GSLC Representative:	Katherine Dunnick	David Harold Ellis
Vice Graduate Student Representative:	David Harold Ellis	Katherine Duke

Committees: The NANO SS has been operating on Executive Committees and assigned officer duties. This document was recently revised and placed on the SS website, as well as in our ToxChange file directory.

II. Activities:

2017 SOT Annual Meeting Reception was held in Baltimore, Maryland on 13 March 2017.

Approximately 75 people were in attendance.

Dr. Tanguay called the meeting to order at 6:00 PM on.

Meeting Minutes: The meeting began with a networking session. Dr. Tanguay then highlighted the events of the evening. This included: Member Achievements, Secretary-Treasurer's Report, Introduction of New Officers, SOT CCT Presentation, Award Presentations, and the Mentee Raffle.

NANO SS MEMBER ACHIEVEMENTS:

Kevin Dreher received a U.S. Environmental Protection Agency National Honor Award given by Gina McCarthy, previous US EPA Administrator, for: "Research contributing to the protection and safety of the public for evaluating the health effects associated with nano-enabled consumer products".

Dr. William K. Boyes received the 2017 Society of Toxicology (SOT) Ocular Toxicology Specialty Section (OTSS) Career Achievement Award

Laura C. Savery, Ph.D. was appointed to an ORISE postdoctoral fellowship at the FDA in the Division of Biology, Chemistry and Materials Sciences, Center for Devices and Radiological Health in June 2016

Joel Cohen A recent publication was awarded "Prize Paper Award" by PFT: <https://particleandfibretoxicology.biomedcentral.com/>

Donald Anderson (our postdoc rep.) received a three-year postdoctoral NRSA fellowship from NIEHS to examine nanoparticle membrane interactions

Laura C. Savery was appointed to an ORISE postdoctoral fellowship at the FDA in the Division of Biology, Chemistry and Materials Sciences, Center for Devices and Radiological Health

Nanotoxicology SS members formed US - European International Collaboration on Nanotube Safety (ICONS). Dominique Lison and Sybille van den Brule (Belgium), Otto Crutzenberg and Christina Ziemann (Germany), Simion Simon and Flaviu Turcu (Romania), James Bonner (NC State University). <https://nanoicons.wordpress.com>

Joel Cohen Dosimetry protocol was also published in January in Nature Protocols: <http://www.nature.com/nprot/journal/v12/n2/abs/nprot.2016.172.html>

NANO SS Graduate Students that received awards at the 8th International Nanotoxicology Congress (Boston, MA; 1-3 June 2016)

Bergeson & Campbell poster award

- **Vamsi Kodali**, NIOSH
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Wiley poster awards (gift certificates)

- **Lindsey Bishop**, West Virginia University/NIOSH

Nanotoxicology Conference Travel Awards

- **Alaeddin Abukabda**, West Virginia University
- **Nasser Alsaleh**, University of Colorado
- **Katherine Duke**, North Carolina State University
- **Timur Khaliulin**, West Virginia University/NIOSH
- **Monica Sandoval-Johnson**, University of Colorado
- **Katelyn Siegrist**, West Virginia University/NIOSH
- **Candace Wong**, University of Rochester



8th International Nanotoxicology Congress (Boston, MA; 1-3 June 2016): Graduate Student Awardees

SECRETARY-TREASURER'S REPORT (presented by Brian Thrall):

► Net assets at beginning of FY2016:	\$13,571
► Income:	
► Contributions, Registration, misc:	\$7,545
► Dues:	\$ 2,319
► Interest:	\$ 4,615 (Jun 2016)
► Expenses:	\$ 611
► Awards (including plaques):	\$ 8,288
► Reception:	\$ 1963
► EC Meeting (offsite):	\$ 5978
► Net assets at end of FY2016:	\$ 347
► Estimated expenses for 2017 Annual Meeting:	\$ 12,828
► Estimated Net Assets at end of Q1 2017:	\$ 7,958
► Most important asset = You!	\$ 4,870

INTRODUCTION of NEW OFFICERS:

- Vice President-Elect: Flemming Cassee
- Councilor: Jenny Roberts
- Postdoc Representative: Valerie Minarchick
- Student Representative: Mark Ihrie

SOT CCT PRESENTATION: Alison Elder discussed the availability of funds and logistics/goals of the CCT mechanism in SOT.

NANO SS AWARDS PRESENTED:

<p>Graduate Student Award <u>Katherine Duke</u>: Project title: <i>STAT1 Regulates Pulmonary Fibrosis in Mice after Exposure to Multi-Walled Carbon Nanotubes through Suppression of TGF-β1 Production and Signaling</i>. Mentor: James C. Bonner, Ph.D. Institution: Toxicology Program, NC State, Raleigh, North Carolina.</p>	
<p>Postdoctoral Award <u>Ekaterina Mostovenko, Ph.D.</u> Project title: <i>Mass Spectrometry Development of Occupational Nanomaterial Exposure Biomarkers</i>. Mentor: Andrew K. Ottens, Ph.D. Institution: Anatomy and Neurobiology, Virginia Commonwealth University, Richmond, Virginia.</p>	
<p>Best Publication <u>Salik Hussain, Ph.D.</u> <i>Multiwalled Carbon Nanotube Functionalization with High Molecular Weight Hyaluronan Significantly Reduces Pulmonary Injury</i>. Authors: Salik Hussain, Zhaoxia Ji, Alexia J. Taylor, Laura M. DeGraff, Margaret George, Charles J. Tucker, Chong Hyun Chang, Ruibin Li, James C. Bonner, and Stavros Garantziotis Reference: ACS Nano. 2016 Aug 23;10(8):7675-88. doi: 10.1021/acsnano.6b03013. Epub 2016 Aug 2.</p>	

2017 SOT ANNUAL MEETING COURSES and SESSIONS:

- 1) **Nano-SS Mentor-Mentee Match**
- 2) **Nanotoxicology: In Vivo**. Poster Session. Chairs: Todd Stueckle, Shannon Hanna.
- 3) **Nanotoxicology: In Vitro**. Poster Session. Chairs: Jan Simak, Katelyn S. Lavrich.
- 4) **Nanoparticle Exposure, Dosimetry, and In Silico Modeling**. Poster Session. Chairs: Aaron Erdely, Amanda Burns.
- 5) **Nanotoxicology: Carbon-Based Nanomaterials**. Poster Session. Chairs: Salik Hussain, Alexei Basnakian.
- 6) **Nanotoxicology: General**. Poster Session. Chairs: Jonathan Shannahan, Ley Smith.
- 7) **Cardiopulmonary Consequences of Gestational Toxicant Exposure: Getting to the Heart of the Matter**. Symposium. Chair: Lynette Rogers.

8) **Circulatory Mechanisms Underlying the Systemic Effects of Inhaled Nanoparticles and Complex Combustion Mixtures: Common Pathways for Diverse Toxicants.**
Workshop. Chairs: Matthew Campen, Andrew Ottens.

WRAP UP: Robert Tanguay closed the meeting with a discussion of session proposals for the 2018 meeting in San Antonio, TX. The following ideas were shared:

Update on engineered nanomaterial toxicity

Silver
Carbon nanotubes
Titanium dioxide
Cerium
Graphene / 2-D
Emerging materials

Nanotoxicology moving forward

NNI 2.0 - NNCO office
Advanced manufacturing and the role of nanotoxicology
Nanomedicine and the role of nanotoxicology
NIEHS consortium Symposia
Human health effects – where do we stand
Categorization and utility for risk profiling

Beyond the site of exposure – the influence of pulmonary exposures systemically

Neurological
Cardiovascular
Pregnancy
Translocation

It was also recognized that the name of the SS may need to be updated to reflect the evolution of the field in general. An open discussion occurred among the membership. The meeting was adjourned at ~8:00 pm.