



National Capital Area Chapter
Society of Toxicology Newsletter
Electronic Edition

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M. Biggs, Editor

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CHAPTER MISSION STATEMENT

The National Capital Area Chapter of the Society of Toxicology (NCAC-SOT) was established to provide a regional focus for scientists of all disciplines interested in toxicology. The Chapter acts to:

- Sponsor and co-sponsor symposia on current issues in toxicology
- Provide annual awards to an outstanding student and postdoc in toxicology to assist in attending the annual meeting of the SOT
- Maintain communication with the National SOT regarding current toxicology and regulatory concerns
- Sponsor Regional Chapter events at the SOT Annual Meetings

PRESIDENT'S MESSAGE

Hi All:

Our chapter has had a successful past year with increased NCAC-SOT membership, excellent Spring and Winter scientific meetings, and a new collaboration with SRC, Inc. in support of two high school students to attend the annual SOT meeting in Phoenix and present posters from school science projects. This is a very important chapter activity since it will help to assure continued interest in Toxicology among persons early in their scientific training. We are very grateful to SRC, Inc. for their support and look forward to collaborating with them in the future on K-12 projects.

Our next chapter meeting will be at the NCAC-SOT reception during the SOT Annual Meeting in Phoenix. The date, location, and time will be provided at the meeting. I look forward to seeing everyone there and wish you all safe travels.

Best,
Bruce A. Fowler Ph.D., A.T.S.
NCAC-SOT President

GRADUATE STUDENT REPRESENTATIVE'S MESSAGE

Greetings NCAC-SOT Students,

In December, we held our Fall Symposium, *Toxicity Associated with Nanomaterials*, at the National Institutes of Health (NIH) in Bethesda, MD. Speakers from a variety of perspectives including government, industry, and environmental groups addressed many aspects of nanomaterials ranging from development and testing of nanotech drugs to regulatory issues for environmental exposures. In addition to student and postdoc posters, student and postdoc speaker presentations were given from Georgina Harris, Peter Petrochenko, Javiera Bahamonde, and CE McLoughlin.

The 53rd SOT Annual Meeting will be March 23-27 in Phoenix, Arizona. With all of the winter storms we have had in the region this year, we are looking forward to enjoying some sunshine and warm weather in the Valley of the Sun. When you register for the meeting, do not forget to sign up for the Student and Postdoctoral Scholar Events, such as the Student/Postdoctoral Mixer and the *In Vitro* Toxicology Lecture and Luncheon for Students. Additional details and other student events can be found at <http://www.toxicology.org/AI/MEET/AM2014/studevent.asp>. We look forward to seeing you in Phoenix.

We highly encourage student participation in NCAC-SOT. This gives you the opportunity to network with professionals for academia, government, and industry as well as apply for NCAC-SOT awards. If you have any questions about how to get involved with the NCAC-SOT regional chapter contact us at sot.ncac.officers@gmail.com. You can also find us on

ToxChange or follow us on Facebook (SOT National Capital Area Chapter) and Twitter (SOTNCAC).

Sincerely,

Abhishruti S. Parihar and Suzanne N. Martos
Student Representatives

POST-DOCTORAL REPRESENTATIVE'S MESSAGE

Dear NCAC-SOT Postdocs,

The 53rd Annual Society of Toxicology meeting in Phoenix, AZ is right around the corner. Postdoctoral participation is crucial for the success of our national meetings and provides a great opportunity to share your work with other SOT members. When registering, don't forget to sign up for some of the postdoc-specific activities including the Postdoctoral Assembly Luncheon, the Student/Postdoc Scholar Mixer, and the *In Vitro* Toxicology Lecture and Luncheon. The Chat with an Expert program also provides an excellent networking opportunity for postdocs. A complete list of these activities can be found at the following website:
<http://www.toxicology.org/AI/MEET/AM2014/studevent.asp>

If you have any questions or suggestions don't hesitate to contact me (chad.brocker@nih.gov).

Have a great spring and I look forward to seeing everyone in Phoenix!

Sincerely,

Chad Brocker
NCAC-SOT Postdoc Representative

NCAC-SOT MEMBERSHIP

Did you remember to renew both your SOT and NCAC memberships this year?? Annual membership fees for NCAC-SOT are only \$25 for regular memberships and \$10 for full-time students. These negligible fees are used to fund our symposium each year and to support a myriad of student activities, including student awards, travel supplements, and K-12 outreach.

If you have not yet renewed your regional chapter membership, please do so today! You can do so online at <http://www.toxicology.org/script/loginredirect2.asp?page=dues>, or just fill out and mail in the membership application found at the end of this newsletter. It's never too late to renew your NCAC-SOT membership for 2014!

NCAC-SOT EXECUTIVE BOARD MEMBERS

President:	Bruce Fowler (2013-2014) ICF International 703-934-3324 bfowler@icfi.com	Postdoctoral Representative:	Chad Brocker (2013-2015) National Institute of Health Chad.brocker@nih.gov
Vice-President/ President-elect:	LCDR Mark Miller (2013-2014) US Environmental Protection Agency 202-566-0454 mfmillertime@gmail.com	Graduate Student Representative:	Abhishruti Saitu Parihar University of Maryland School of Medicine 410-706-7307 Asparihar@umaryland.edu
Past President/ Councilor	Cal Baier-Anderson (2013-2014) US Environmental Protection Agency 202-564-1933 baier_anderson.caroline@epamail.epa.gov	Graduate Student Vice Representative:	Suzanne Martos Johns Hopkins Bloomberg School of Public Health 480-620-2769 smartos@jhsph.edu
Secretary:	Erik Janus (2012-2015) Monsanto Company 202-383 2866 erik.janus@monsanto.com		
Treasurer:	Christopher Sheth (2012-2015) US Food and Drug Administration 240-402-3163 Christopher.Sheth@fda.hhs.gov		
Councilors:	Melanie Biggs, Newsletter editor (2012-2015) Consumer Product Safety Commission 301-987-2593 mbiggs@cpsc.gov		
	David Szabo Website coordinator (2013-2016) Reynolds American Inc. 336-741-4435 szabod@rjrt.com		
	Susan A. Laessig Student Liason (2013-2016) US Environmental Protection Agency 202-564-5232 laessig.susan@epa.gov		

2013 WINTER SYMPOSIUM

The NCAC-SOT held its winter meeting at the National Institutes of Health in Bethesda on December 16, 2013. The focus of the symposium was *Toxicity Associated with Nanomaterials*. Nanotechnology has become pervasive in both commerce and our daily lives. This conference addressed the applications of nanotechnology and their impact to human health in the areas of medicine, electronics, biomaterials, and energy production. By bringing together leading scientists to debate the future implications of nanotechnology as well as the importance of characterization, the NCAC-SOT hosted lively discussion among participants.

Keynote speakers included Drs. Christopher Weis, Scott McNeil, and Jennifer Sass. Dr. Weis serves as a senior advisor at the National Institute of Environmental Health Sciences and on national and international committees and task forces investigating the effects of nanomaterials. Dr. Weis gave an overview of nanotechnology, the molecular interactions at the biotic-abiotic interface, why it is important, and the various implications for risk assessment and regulation.

Dr. Scott McNeil serves as the Director of the National Cancer's Institute's Nanotechnology Characterization Laboratory (NCL), where he coordinates preclinical characterization of nanotech cancer therapeutics and diagnostics. His keynote speech addressed the importance of carefully characterizing nanomaterial, in terms of size, structural configuration, and physical and chemical properties, prior to investigatory research. Through careful characterization, Dr. McNeil has been able to reduce variability and increase the reliability of the laboratory's research.

As a Senior Scientist for the Natural Resources Defense Council's (NRDC), Dr. Jennifer Sass brought a unique perspective to the conference. Her focus on the evaluation of scientific data provided a basis for determining practical regulation and health safety practice. By providing the context for applying primary scientific data, Dr. Sass brought together the exceptional nanotox findings and closed out an extraordinary symposium.

The NCAC-SOT also provides opportunities for students and postdocs to speak alongside renowned experts. Three students and one postdoc delivered groundbreaking research in the field of nanotoxicology. Georgina Harris, Peter Petrochenko, Javiera Bahamonde, and CE McLoughlin each advanced our understanding and integrated yet to be published data into their platform presentations.

Please follow this link for speaker abstracts:

<http://www.toxicology.org/isot/rc/ncac/events.asp>



Keynote speaker Dr. Scott McNeil

GRADUATE AND POSTDOCTORAL STUDENTS PRESENT RESEARCH AT WINTER SYMPOSIUM

The 2013 NCAC-SOT Winter Symposium focused on *Toxicity Associated with Nanomaterials* and was held December 16, 2013 at the NIH-NLM Lister Hill Auditorium (Bethesda, Maryland). Graduate and postdoctoral students were invited to present their original research on any topic during the platform sessions and at a poster exposition at the Winter Symposium. We anticipate more opportunities for students to present at future Spring and Fall/Winter Symposia.

Students giving platform presentations:

Georgina Harris, *Center for Alternatives to Animal Testing (CAAT), Johns Hopkins Bloomberg School of Public Health* - Use of automated high content fluorescence imaging and *in silico* models for *in vitro* assessment of nanomaterial toxicity in Balb/c3T3 cells

Javiera Bahamonde, *Virginia Tech* - Short- and long-term effects of commercially available gold nanoparticles in rodents

Colleen E. McLoughlin, *NIOSH* - Toxicity and allergy responses in mice following pulmonary exposure to nanoparticle silver

Peter Petrochenko, *Center for Devices and Radiological Health, USFDA and Joint Dept of Biomedical Engineering, University of North Carolina at Chapel Hill* - Laser 3D printing with nanoscale resolution: improving biocompatibility and mitigating toxicity from photoinitiators

Students giving poster presentations:

Shelby Skoog, Joint Dept. of Biomedical Engineering, UNC-NCSU, Raleigh, NC and CDRH, USFDA - Biological evaluation of ultrananocrystalline and nanocrystalline diamond coatings

Chia-Wen “Amy” Hsu, National Center for Advancing Translational Sciences, National Institutes of Health - Quantitative profiling of environmental chemicals and drugs for farnesoid X receptor activity

SOT MEETING IN PHOENIX

The SOT Annual meeting is March 23 to 27 in Phoenix. There will be a NCAC-SOT reception during the meeting. Please look for location, day, and time information while at the Annual meeting. Please see the following website for more information:

<http://www.toxicology.org/AI/MEET/AM2014/registration.asp>

High School Students Win SRC award to attend SOT

SRC, Inc. has recently added to their support of SOT activities by contributing to SOT and NCAC-SOT K–12 outreach efforts. A not-for-profit research and development company, SRC, Inc., takes an active role in supporting local nonprofit organizations aligned with its mission to protect people and the environment, and especially encourages STEM (Science, Technology, Engineering, and Math)-related activities. NCAC-SOT is using their funds to sponsor regional-area high school students to present posters during the High School Poster Presentation (<http://www.toxicology.org/AI/MEET/AM2014/edout.asp>) March 25, 2013, in Phoenix, Arizona during the SOT 53rd Annual Meeting, March 23–27, 2014. This is an opportunity for high school students to showcase their research related to toxicology, learn more about the discipline, and have the experience at a major scientific meeting guided by an SOT mentor.

High school students and teachers will attend a day of workshops and a student poster exposition. This will be an exciting day of presentation, toxicology activities, and talking with toxicologists. Toxicologists will guide the visits and students will have the opportunity to learn more about the fascinating field of toxicology. High school students will display their toxicology-related posters in a special session at Annual Meeting in the ToxExpo. This display recognizes high school student effort and provides scientific meeting experience.

Students Compete for Bern Schwetz Student Travel Awards

Students who are attending the 53rd Annual SOT Meeting in Phoenix, Arizona, who are full time students and have had an abstract accepted for the meeting program are invited each year to apply for awards to support travel to the meeting. The deadline for graduate and postdoctoral students to apply for the NCAC-SOT Bern Schwetz Student Travel Award was January 31, 2014. This year, five students applied for the awards by submitting materials to NCAC-SOT. A panel of three judges scored the abstracts according to clarity of the abstract and quality of the research. Criteria included clear descriptions of the hypothesis, methods, results, and conclusions, and the originality and significance of the research.

The winners of the 2014 Awards are:

Spencer Todd, *Department of Epidemiology and Public Health, University of Maryland, Baltimore*- Prenatal Exposure to Chlorpyrifos Leads to MAPK Dysfunction and Epigenetic Modifications in the Brain

Peter Petrochenko, *Center for Devices and Radiological Health, USFDA and Joint Dept of Biomedical Engineering, University of North Carolina at Chapel Hill* - Laser 3D printing with nanoscale resolution: improving biocompatibility and mitigating toxicity from photoinitiators

Anurag Mishra, *CDRH, USFDA* - Induction of Autophagy at Non-Cytotoxic Concentrations of Silver Nanoparticles in HepG2 Cells

2014 SPRING SYMPOSIUM

Please look for emails soon for information on the upcoming spring symposium.

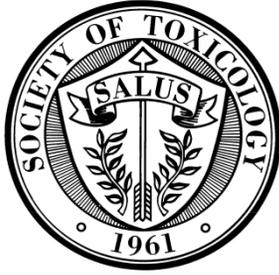
NCAC-SOT Treasurer's Report – February 19, 2014

by
Chris Sheth, Treasurer

Account activity since last report

(Dated July 12, 2013 in July 2013 Newsletter)

June 30, 2013 (Closing balance)				\$4,110.05
Debits				
	Girl Scout Science Day	Science Supplies, etc.	\$2,238.00	
	Annual Fall NCAC SOT Meeting December 16, 2013	“Toxicity Associated with Nanomaterials”	\$0.00	
	Total Debits		\$2,238.00	(\$1872.05)
Credits				
	Travel support for high school student to attend meeting in Phoenix, AZ 2014		\$1,000.00	
	Dues and other credits		\$4,652.00	
	Total Credits		\$5,652.00	(\$7,086.14)
January 31, 2014* (Closing balance)				\$7,524.05
*Most recent bank statement in our possession.				



National Capital Area

MEMBERSHIP APPLICATION

Name: _____

Affiliation: _____

Address _____

City: _____

State: _____ Zip Code: _____

Area Code: _____ Phone: _____ FAX: _____

E-mail: _____

Membership Type _____ Full Member (\$25) _____ Student (\$10)

Please check the most appropriate responses:

SOT Member	Highest Degree Attained		Type of Affiliation
_____ Yes	_____ A.S.	_____ M.P.H.	_____ Academia
_____ No	_____ B.A.	_____ M.S.	_____ Consulting
	_____ B.S.	_____ M.A.	_____ Contract Lab
	_____ D.V.M.	_____ Ph.D.	_____ Government
	_____ D.V.M./Ph.D.	_____ Sc.D.	_____ Industry- Chemical/Petroleum
	_____ M.D.	_____ V.M.D.	_____ Industry- Pharmaceutical
	_____ M.D./Ph.D.	_____ V.M.D./Ph.D.	_____ Industry- Other
			_____ Other- _____

Please complete the information above and send with a check, money order or credit card (payable to National Capital Area Chapter SOT, no POs) to the address below. The NCAC SOT will review your application, and you will be notified within 30 days. Those not accepted will receive a full refund. Current RC members: please do not use this form since your renewal dues are billed annually through SOT.

Payment Type: Money Order _____ Check _____ Credit Card _____

Credit Card # _____ Exp date _____

Name on Card _____

Signature _____

Send to:
 Christopher Sheth, Treasurer 11102 Lund Place
 NCAC-SOT Kensington, MD 2089
christopher.sheth@fda.hhs.gov