

NCSOT fall meeting highlights “Hot Topics in Toxicology”

By Deacquita Diggs

The North Carolina chapter of the Society of Toxicology (NCSOT) held its annual fall meeting Oct. 9 in the Rodbell Auditorium at NIEHS.

Chapter

(<http://www.toxicology.org/isot/rc/nc/index.asp>)

president and RTI International nanotoxicologist **Christie Sayes, Ph.D.**

(http://www.rti.org/page.cfm/Nano_EHS_Expertise)

, opened the meeting, which featured talks on hydrofracturing, coal fly ash, and e-cigarettes, by describing the professional responsibility of members to stay abreast of new developments and hot topics in toxicology.

“We need to educate ourselves and educate our peers on how we can have successful positive conversations with our friends, neighbors, and colleagues on these areas of toxicology and environmental health that are hitting the news,” Sayes stated.

Postdoctoral fellows honored for quality research

The President’s Awards for Research Competition (PARC) were also presented to postdoctoral fellows who submitted abstracts to the competition. The third place winners were Yong Ho Kim, Ph.D. and Rui Yu, Ph.D. The second place winner was Yongquan Lai, Ph.D., and first place went to Samantha Snow, Ph.D., who gave an oral presentation as part of her prize.

Snow discussed the connection between ozone exposures and the metabolic diseases diabetes and obesity. “A risk factor for metabolic disease includes ambient air pollution,” Snow said. “There is a link between fine particulate matter and prevalence of diabetes in America.”

Fracking, coal ash, and e-cigarettes — emerging public health concerns

University of Pennsylvania pharmacologist **Trevor Penning, Ph.D.**

(<http://www.med.upenn.edu/apps/faculty/index.php/g275/p12620>)

, discussed hydraulic fracturing (hydrofracking). He focused on the rapid growth of hydrofracking in Pennsylvania, where the Marcellus Shale, a rich source of natural gas, takes up about half of the state’s land mass.

“I think this industry is here to stay, but it needs to be done safely,” said Penning. Health issues include water contamination from drilling and air pollution from diesel truck exhaust. “I think there are ways to improve the technology,” said Penning.

North Carolina State University environmental toxicologist **David Buchwalter, Ph.D.**

(<http://tox.sciences.ncsu.edu/people/david-b-buchwalter/>)

, explored the growing controversy over coal ash in North Carolina waterways.



Sayes opened the fall meeting on hot topics in toxicology by noting the chapter’s growth to 411 members, making it one of the largest and most active in the U.S. (Photo courtesy of Steve McCaw)



Kim, right, a UNC postdoc working at the U.S. Environmental Protection Agency (EPA), received \$100 as part of his third place finish in the PARCAward competition. (Photo courtesy of Steve McCaw)



Yu, a postdoc at UNC, tied for third place. (Photo courtesy of Steve McCaw)

“The more stuff we keep out of air, the more we are creating waste streams that pollute water,” he explained.

Buchwalter’s focus was the wet storage of ash. Once ash is released from power plants and makes contact with water, trace elements are released almost immediately, resulting in water contamination. “Arsenic and selenium are the two things we focus on the most in terms of ecological human health concerns,” said Buchwalter. He concluded that water contamination is preventable, but very costly to remediate.

University of North Carolina at Chapel Hill (UNC) respiratory biologist [Ilona Jaspers, Ph.D.](http://www.med.unc.edu/tcors-lung/about-us/faculty/ilona-jaspers)

(<http://www.med.unc.edu/tcors-lung/about-us/faculty/ilona-jaspers>)

, discussed the health concerns of the increasingly popular e-cigarettes. “They [e-cigarettes] may very well be safer,” she said, as she compared them to traditional cigarettes, but e-cigarettes are not currently regulated by the U.S. Food and Drug Administration (FDA).

“We have absolutely no idea about flavor toxicity,” she said, pointing to the more than 7,000 flavors now on the market for e-cigarettes. Because little data are available, animal and *in vitro* models are needed to study the short- and long-term effects of using e-cigarettes.

NCSOT councilor and NIEHS postdoctoral fellow, Jason Stanko, Ph.D., secured sponsorship for the meeting from Charles River Laboratories, The Society of Toxicology, The Hamner Institutes for Health Sciences, and Burroughs Wellcome Fund.

(Deacquinta Diggs, Ph.D., is a National Health and Environmental Effects Research Laboratory postdoctoral fellow at the U.S. Environmental Protection Agency in Research Triangle Park, North Carolina)



The second place PARCAward went to Li, a postdoc at UNC, who received \$200 as part of his prize. (Photo courtesy of Steve McCaw)



Winning the first place PARCAward earned Snow a cash prize of \$300 and the privilege of making an oral presentation on her research. She is an Oak Ridge Institute for Science and Education postdoc at EPA. (Photo courtesy of Steve McCaw)



Penning, an NIEHS grantee, underscored the seriousness of hydrofracking as a public health concern, but he also managed to enjoy the lighter side of Pennsylvania politics. (Photo courtesy of Steve McCaw)



Director of NIEHS and the National Toxicology Program, Linda Birnbaum, Ph.D., attended the meeting and engaged Penning with questions about fracking and ground water contamination. (Photo courtesy of Steve McCaw)



NCSOT vice president, MaryJane Selgrade, Ph.D., introduced the coal fly ash presentation. Buchwalter is funded by the Tennessee Valley Authority. (Photo courtesy of Steve McCaw)



Jaspers focused her talk on the potential health concerns of e-cigarettes and the flavors people inhale along with nicotine. In addition to her NIEHS respiratory research, Jaspers is supported by a National Institutes of Health and a FDA Tobacco Centers of Regulatory Science grant. (Photo courtesy of Steve McCaw)

The Environmental Factor is produced monthly by the [National Institute of Environmental Health Sciences \(NIEHS\)](http://www.niehs.nih.gov/) (<http://www.niehs.nih.gov/>)

, Office of Communications and Public Liaison. The content is not copyrighted, and it can be reprinted without permission. If you use parts of Environmental Factor in your publication, we ask that you provide us with a copy for our records. We welcome your [comments and suggestions](#). (bruskec@niehs.nih.gov)

This page URL: NIEHS website: <http://www.niehs.nih.gov/>
Email the Web Manager at webmanager@niehs.nih.gov