

# Superfund Research Program e-Posted Notes

November 4, 2016 (Issue 154)

## HEADLINES

### NIEHS Environmental Health Science FEST

The first ever NIEHS Environmental Health Science FEST (EHS FEST) is just around the corner! This meeting is an opportunity for dialogue across the many different NIEHS grant programs and among our grantees, community, community groups, small businesses, and federal partners with a common interest in environmental health.

**This event will take place December 5 – 8, 2016 in Durham, North Carolina.** Please note that registration for the EHS FEST is now closed. However, we ask that you still register for the EHS Fest by being placed on the waiting list. To be placed on the waiting list, please send an email to [EHSFEST@niehs.nih.gov](mailto:EHSFEST@niehs.nih.gov) with the subject line: EHS FEST registration.

**The SRP Annual Meeting will be held all day on Monday, December 5 as part of the EHS FEST.** If you haven't done so already, please RSVP as soon as possible for the SRP Annual Meeting using the [SRP Annual Meeting Doodle Poll](#). When filling out the Doodle Poll, be sure to include your first and last name so that your contact information can be found from the EHS Fest Registration.

Visit the NIEHS [EHS FEST webpage](#) for information about the agenda and hotel accommodations. The hotels in the area are filling up fast so book your hotel today! If you have any questions about the SRP Annual Meeting, please contact Danielle Carlin ([danielle.carlin@niehs.nih.gov](mailto:danielle.carlin@niehs.nih.gov)). For general questions about the EHS Fest, please contact Mike Humble ([humble@niehs.nih.gov](mailto:humble@niehs.nih.gov)) and Liam O'Fallon ([ofallon@niehs.nih.gov](mailto:ofallon@niehs.nih.gov)).

### SRP Risk e-Learning Series: The Interplay Between Environmental Exposures and Infectious Agents

The NIEHS SRP invites you to join us for the third session in a series of Risk e-Learning webinars, [The Interplay Between Environmental Exposures and Infectious Agents](#), hosted on EPA's Contaminated Site Clean-Up Information (CLU-IN) website. The series, which is free and open to the public, highlights researchers from around the country who are exploring the relationship between environmental exposures, infectious agents,

## EMPLOYMENT OPPORTUNITIES

### Professor in Chemical, Biochemical and Environmental Engineering – Brown University

Brown University announces an open-rank faculty search with special focus on candidates with research interests in environmental technology, environmental health, or environmental science. The appointment would be within the Chemical, Biochemical, and Environmental group with Brown's School of Engineering. The candidate would be expected to have core research strengths in the chemical sciences and to interact with Brown's Superfund Research Program. Candidates will be considered at the rank of assistant, associate and full professor, depending upon qualifications and experience. Candidates with a demonstrated track record of raising research funding in related areas are preferred.

For more information and to submit application materials, see the [job opening](#). The Search Committee will begin reviewing applications on **January 15, 2017** and applications should be submitted by that date in order to receive full consideration. For more information, contact Robert Hurt, [Robert\\_Hurt@brown.edu](mailto:Robert_Hurt@brown.edu).

### Positions in Asthma Research and Environmental Epidemiology – University of Pennsylvania

and immune response.

[Session III - Co-Exposures in the Lung](#) will be held on **Monday, November 7 from 1:00 – 3:00 pm EST**. In this session, presenters will discuss their innovative research efforts that focus on interactions between environmental exposures and infectious agents in the lung.

- **Steven Kleeberger, Ph.D.**, a principle investigator in the NIEHS Intramural Research Program, will describe his work to understand the mechanisms of Respiratory Syncytial Virus infection and disease severity and how that relates to exposure to environmental insults.
- **Fenna Sillé, Ph.D.**, an assistant professor at Johns Hopkins University and former University of California, Berkeley SRP postdoctoral researcher, will discuss how early-life exposure to arsenic permanently changes the immune system and increases infectious disease risk later in life using Mycobacterium tuberculosis in the lung as the model.
- **Stephanie Cormier, Ph.D.**, a professor at the University of Tennessee Health Science Center and Center Director of the Louisiana State University SRP Center, will discuss the relationship between environmentally-persistent free radicals and severity of respiratory viral infections.

**Michael Humble, Ph.D.**, Program Director in the Genes, Environment and Health Branch in the NIEHS Division of Extramural Research and Training (DERT), will moderate the webinar.

We were pleased with the interest that the first two seminars attracted and we look forward to this third and final session on Monday! If you missed the first two sessions, visit the [Risk e-Learning website](#) for more information and links to the archives.

## IN THE NEWS

### NIEHS SRP News Stories

Take a moment to read about some of our colleagues' latest activities in this month's Environmental Factor, the NIEHS newsletter:

- [Fry leads community talk on metals exposure and health](#)
- [New method for evaluating chemical alternatives](#)

Visit the SRP news page for more stories about the Program:

- [Alumni Duke SRP Trainees Present at ITEHP Career Symposium](#)
- [UA SRP Researcher Visits ATSDR](#)
- [Boston University SRP Grantees Present at LINCS Consortium Meeting](#)
- [Penn SRP Center Researcher and BoRit Community Advisory Group Receive EPA Award](#)

The University of Pennsylvania - Center of Excellence in Environmental Toxicology has open tenure-track faculty positions at all levels to establish programs in Translational Asthma Research and Environmental Epidemiology.

The [Translational Research Program in Asthma](#) is seeking individuals with a clinical research program in adult or pediatric asthma or a translational research program working on airway hyper-responsiveness, aberrant lung injury or repair, drug resistance, inhalation toxicology, allergy and immunology, gene-environment interactions or epigenetic therapies.

The [Program in Environmental Epidemiology](#) is seeking applicants with a research program that links the use of exposure science (exposure assessment, biosensors, biomarkers, geographic information systems, cartographic tools) with diseases of environmental etiology (cancer subtypes, lung and airway disease, metabolic diseases, or developmental basis of adult-disease etc.). Expertise in the epidemiological design of retrospective and prospective studies and the analysis of large data sets is desirable.

### Toxicologist Positions – SciMetrika

[SciMetrika](#) is a public health consulting firm whose mission is to provide innovative scientific, technical, and logistical solutions that advance human health. They serve federal, state, and local agencies, commercial companies, educational institutions and private research organizations. They are currently seeking part time and full time Toxicologists with a Masters or PhD, to support their projects. Individuals can work from remote locations, and this is a great opportunity for students to get hands

## SRP Grantees Featured in DERT Stories of Success

Bernhard Hennig, the University of Kentucky SRP Center Director and project leader, and Karletta Chief, the University of Arizona SRP Community Engagement Core leader, were both recently highlighted in NIEHS DERT Stories of Success.

[Bernhard Hennig's story](#) highlights his research over the years studying the link between diet and environmental exposures.

[Karletta Chief's story](#) focuses on her work responding to Navajo Community Concerns after the Gold King Mine Spill. Check out the [DERT Stories of Success page](#) for more on their research and outreach as well as highlights on other NIEHS-funded researchers.

## Schnoor Recognized in Environmental Science and Technology Issue

In July, University of Iowa SRP Center research Jerry Schnoor, was recognized on the cover of [Environmental Science and Technology](#). The issue was dedicated to honoring his impacts in areas such as global air issues, groundwater pollutant transport and remediation, and raising awareness of sustainability on a national and international stage. Jerry Schnoor has offered his scientific abilities, leadership, and passion as a Professor at the University of Iowa for 40 years. He also served as the Editor-in-Chief of ES&T from 2003 to 2014, during which time ES&T expanded in international reach and ES&T Letters was launched. The issue included a comment entitled, [Jerry Schnoor: The Impact on Others](#).

## Millions of People at Risk Drinking Contaminated Groundwater: Article on SRP Work in Science Daily

Many cities around the world depend on pumping groundwater for their residents, but there is growing evidence that intensive groundwater pumping under urban landscapes may be detrimental to water supplies and pose health problems that have the long-range potential to kill millions of people who drink it, according to a study by a team of international scientists. Using computer models and field observations, the team used Dhaka, Bangladesh as a prime example of intensive groundwater pumping. They noted that such continued use can depressurize deep, drinking water aquifers increasing the chance that those aquifers will be contaminated by drawing down water from more contaminated shallow aquifers. The study was funded by the SRP and includes researchers from the Columbia SRP Center. See the [Science Daily](#) article to read more.

## TRAINEE SPOTLIGHT

### Lariah Edwards, Boston University

Lariah Edwards is a Ph.D. student at Boston University (BU) under the

on work in hazard characterization and risk assessment and for experienced toxicologists to conduct freelance work. They are looking for support to conduct literature reviews based on an already developed SOP and to summarize toxicological data into an existing template. In addition, the toxicologist will provide expertise on a variety of projects in environmental health and tobacco policy research. For additional information and to inquire about existing opportunities, please contact, Maryla Smith, Senior Recruiter, [msmith@scimetrika.com](mailto:msmith@scimetrika.com).

### Postdoctoral Fellow – Silent Spring Institute and Northeastern University

This two-year postdoctoral appointment is part of the NIEHS Training Program, "Transdisciplinary Training at the Intersection of Environmental Health Science and Social Science" (EH+SS), co-directed by Silent Spring Institute and Northeastern University's Social Science Environmental Health Research Institute (SSEHRI). They are seeking a candidate with doctoral training in endocrinology, developmental biology, or cancer biology with a focus on environmental health. Applicants should demonstrate a strong research record, as well as experience in statistics, biology, toxicology, chemistry, computer science, or informatics. R programming is an asset. This research fellowship is part of a unique opportunity to engage in environmental health - social science training. In addition to a strong background in her/his discipline, the candidate should have an interest in public health, community-based participatory research, and the social context of environmental health. See the [Northeastern Postdoctoral Fellow flyer](#) for more information on the

guidance of BU SRP project leader Jennifer Schlezinger. Her research focuses on investigating the effects of chemical mixtures on bone health.

Using data from molecular toxicology studies, she is performing multidisciplinary research to link bone health effects with exposure to mixtures of environmental PPAR $\gamma$  ligands. In addition to investigating the association between environmental exposures and human bone quality, she aims to develop a novel human biomarker of cumulative PPAR $\gamma$  activity and apply statistical models to assess complex exposure mixtures.

This year, trainee Lariah Edwards won an [EPA Science to Achieve Results \(STAR\) Fellowship](#) to continue to expand her research with BU SRP [Project 3](#). The EPA STAR Fellowship was awarded to 52 graduate students in environmental studies across the country in 2016 with the goal of supporting the education and training of future researchers. Lariah is one of only two graduate students in Massachusetts to be selected for the fellowship. With the EPA Star funding, Lariah will continue her doctoral studies and is able to extend her research in new directions that will support her original objectives.

Both in and out of lab, Lariah enjoys serving as a mentor to students interested in science and research. In Boston, she has served as a Big Sister for Big Sister Association of Greater Boston. Outside of the lab, she loves to read, write, visit her sister in DC, and explore Boston and the rest of the New England area.



## HOT PUBLICATION

### Distinguishing Toxic from Biocompatible Nanomaterials

The interdisciplinary work conducted within two Brown SRP Center projects has led to a new finding described in an [article](#) in the Proceedings of the National Academy of Sciences. The SRP team collaborated with the group of Huajian Gao in the Brown School of Engineering in a combined computational and experimental study of carbon nanotube interactions with living cells. The team considered the question of why exposure to some types of carbon nanotubes, but not others, gives rise to adverse cellular responses. The team proposes a new mechanics-based mechanism, in which certain nanotubes push against and damage the inner leaflet of the lipid bilayer membrane that forms the intracellular organelle called the lysosome. The team goes on

fellowship and how to apply.

### Postdoctoral Investigator – Woods Hole Oceanographic Institution

The department of Biology at Woods Hole Oceanographic Institution is seeking a Postdoctoral Investigator to join their team. This is a full-time position and is eligible for benefits. The initial appointment will be for one year with the possibility of an extension. The position is available immediately to participate in an NIEHS-funded project to characterize the role of DNA methyltransferases (DNMTs) in toxicant-induced alterations in DNA methylation. This project utilizes a combination of developmental biology, molecular biology, and bioinformatics approaches to characterize the role of DNMTs in zebrafish. Some of the approaches include generation of knockouts using gene editing tools, molecular cloning, cell transfection and analysis of DNA methylation (bisulfite sequencing) and gene expression (RNAseq) datasets. For more information and to apply, visit the [Woods Hole Oceanographic Institution website](#).

### Postdoctoral Investigator – University of Kentucky

A postdoctoral investigator position is available to participate in an NIEHS funded project within the University of Kentucky Superfund Research Center (UK SRC) in Bernhard Hennig's laboratory. The research in Hennig's lab focuses on the paradigm that nutrition can modulate environmental insults and utilizes a combination of cell culture and mouse models to explore molecular biology approaches to understand the regulatory interplay of healthful nutrition and inflammatory diseases linked to

to offer a quantitative graphical classification system for distinguishing the more hazardous nanotube varieties, based on their length and thickness, and their resistance to mechanical buckling under the soft compressive forces inside the cell. The new mechanism and classification system may help developers design and/or select carbon nanotubes for improved safety.

## AWARD WINNERS

### Marsillach Lopez Receives Science Development Grant

Judit Marsillach Lopez, junior faculty at the University of Washington (UW), was awarded an American Heart Association grant for young investigators. She is working on a [UW SRP Center project](#) with Clem Furlong, which involves understanding the role of paraoxonases (PON) 1 and 2 in modulating oxidative stress-induced neurotoxicity. Her recently funded American Heart Association project focuses on characterization of PON1 as an early biomarker of cardiovascular disease susceptibility.

### Varner Received Distinguished Alumnus Award

Louisiana State University (LSU) SRP researcher Kurt Varner was awarded the Michigan State University (MSU) Ken Moore Distinguished Alumnus Award for 2016. Dr. Varner received the award at the 50-year anniversary celebration of the founding of the Department of Pharmacology and Toxicology at MSU in September. The celebration included a symposium at which Varner gave a talk entitled, Cardiovascular toxicity of environmentally persistent free radicals: a unique pollutant particle system. Varner is the Lederle Laboratories/David R. Bethune Professor of Pharmacology and Head of the Department of Pharmacology and Experimental Therapeutics at LSU Health Sciences Center New Orleans and an LSU SRP project leader.

## WEBINARS

### Wetterhahn Awardee Nishad Jayasundara to Present at NIEHS

The Superfund Research Program invites you to join us for the Wetterhahn Award Lecture on **November 29, 2016 from 2 – 3 pm EST**. [Nishad Jayasundara](#), the 2015 Wetterhahn Awardee, will present a talk entitled, Evolutionary toxicology and environmental health: lessons learned from fish populations in polluted habitats, which will focus on his postdoctoral research at Duke University.

The Wetterhahn Award Lecture will be webcast. Visit the [NIEHS webcast page](#) to join the event remotely.

The event will be held on the NIEHS Campus in the Rodbell Auditorium. If you are local to the Research Triangle Park, NC, we encourage you to [attend at NIEHS](#). If you plan on attending, please contact Rosemary Moody ([rosemary.moody@nih.gov](mailto:rosemary.moody@nih.gov)) to let her know you will be there and please remember to bring your

exposure to persistent organic pollutants. The postdoctoral scholar will be involved in research to explore molecular signaling pathways related to nutrition and toxicology with a focus on endothelial cell function and vascular biology or inflammatory diseases, keeping in mind possible multiorgan involvement in the etiology of cardiovascular diseases. The postdoctoral scholar also is encouraged to participate in mentoring graduate students. For more information, contact: Jennifer Moore, Program Coordinator, UK-SRC; email: [j.moore2@uky.edu](mailto:j.moore2@uky.edu); phone: 859 218 1343.

### Assistant or Associate Professor of Environmental & Occupational Health – Oregon State University

As part of its strategic plan, Oregon State University (OSU) is building on its existing strengths in the core disciplines of public health and human sciences by hiring a new faculty member with expertise in Environmental and Occupational Health in an accredited College of Public Health and Human Sciences (CPHHS). This is a full-time, 9-month tenure-track appointment for an Assistant or Associate Professor of Environmental and Occupational Health located in Corvallis, Oregon. To see specific position announcements, job descriptions and requirements, and to apply, go to [Online Application System](#), posting 00755UF. **For full consideration, apply by January 15, 2017.** The anticipated start date is Sept. 16, 2017.

## CURRENT RESEARCH BRIEF

Research Brief 263: **A Link Between Exposure to PCBs, Diet, and Cardiovascular Disease**  
Bernhard Hennig, University of Kentucky) is available on the [SRP Research Briefs website](#).

ID to enter the building.

## BD2K Guide to the Fundamentals of Data Science

The NIH Big Data to Knowledge (BD2K) Guide to the Fundamentals of Data Science is a series of online lectures given by experts from across the country covering a range of diverse topics in data science. This course is an introductory overview that assumes no prior knowledge or understanding of data science.

The webinar series consists of weekly presentations from experts across the country covering the basics of data management, representation, computation, statistical inference, data modeling, and other topics relevant to "big data" in biomedicine. The series will have a new lecture every Friday at 12 - 1 pm ET for the rest of the year.

For up-to-date information about the series and to see archived presentations, visit the [BD2K Training Coordinating Center website](#).

## FUNDING OPPORTUNITIES

### EPA Green Chemistry Challenge Awards

The U.S. Environmental Protection Agency (EPA) announced its call for nominations for the 2017 Presidential Green Chemistry Challenge Awards for companies or institutions that have developed a new process or product helping to protect public health and the environment. Green chemistry is the design of chemical products and processes that reduce the generation and use of chemicals that are hazardous to the environment and people's health. EPA anticipates giving five awards to outstanding green chemistry technologies in traditional categories, and a sixth award to a green chemistry technology that addresses climate change.

Nominations for innovative technologies featuring greener chemicals and products are due to the agency by **Dec. 31, 2016**. For instructions on submitting entries and more information about past award winners, visit the [EPA Green Chemistry page](#).

### KC Donnelly Award Supplements

The NIEHS SRP KC Donnelly administrative supplements are made available by the SRP to promote transdisciplinary and translational research among early SRP investigators (e.g., graduate students/post-doctoral researchers) which includes the recruitment of talented researchers and improving the quality of the educational and training environment. The purpose of these supplements is to provide current SRP-funded graduate students/post-doctoral researchers with translational/transdisciplinary opportunities and experiences within other SRP-funded centers, with other SRP grantees, government laboratories (e.g., EPA, ATSDR, NIEHS), or other

Past [Research Briefs](#) are available on the SRP website.

To receive the monthly Research Briefs in your e-mail, please send your e-mail address to [heacockm@niehs.nih.gov](mailto:heacockm@niehs.nih.gov).

If you have ideas for future Research Briefs, please submit them to [heacockm@niehs.nih.gov](mailto:heacockm@niehs.nih.gov).

## SRP-SUPPORTED EVENTS

**Society of Environmental Toxicology and Chemistry (SETAC) North America 37th Annual Meeting**  
November 6 - 10, 2016  
Orlando, Florida  
[Website](#)

**The Interplay Between Environmental Exposures and Infectious Agents**  
**Session III - Co-Exposures in the Lung**  
November 7, 2016, 1:00 - 3:00 pm ET  
Webinar  
[Website](#)

**The 8th Princess Chulabhorn International Science Congress**  
**Environmental Health: Inter-linkages Among the Environment, Chemicals, and Infectious Agents**  
November 13 - 17, 2016  
Bangkok, Thailand  
[Website](#)

**18th Annual HHS SBIR/STTR Conference**  
November 15-17, 2016  
Orlando, Florida  
[Website](#)

**Wetterhahn Award Lecture:**  
**Nishad Jayasundara**  
November 29, 2016, 2 - 3 pm ET  
Research Triangle Park, North Carolina  
Visit the [NIEHS webcast page](#) to join the event remotely

**NIEHS Environmental Health**

agencies (state, local, Tribal).

KC Donnelly Administrative Supplement applications are due **January 31, 2017**. Please see the KC Donnelly [webpage](#) and [guidelines](#) for more information. If you have specific questions about developing a KC Donnelly externship experience (e.g., if within scope of the current grant), please contact your Program Administrator listed on the Notice of Award (NOA) for the grant you are associated with.

## INTERAGENCY NEWS

### TCE Added to 14th Report on Carcinogens

The release of the U.S. Department of Health and Human Services [14th Report on Carcinogens](#) includes seven newly reviewed substances, including trichloroethylene (TCE), bringing the cumulative total to 248 listings. The Report on Carcinogens is prepared by the National Toxicology Program (NTP).

TCE is an industrial solvent used primarily to make hydrofluorocarbon chemicals. It is being listed in the Report on Carcinogens as a known human carcinogen. Since 2000, TCE had been listed as a reasonably anticipated human carcinogen. However, numerous human studies showing a causal association between TCE exposure and an increased risk for kidney cancer have led NTP to reevaluate and reclassify TCE as known to be a human carcinogen. Because of its widespread use as a metal degreasing agent to maintain military equipment, it has been found in the groundwater at many military and Superfund sites.

### How can we get More Women and Minorities in Small Businesses to Participate in NIH SBIR/STTR Programs?

The NIH is seeking public input on a proposed new supplement to facilitate participation of women and socially and economically disadvantaged individuals in small businesses through the Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs. One of the goals of the SBIR/STTR programs is to foster and encourage participation by socially and economically disadvantaged and women-owned small businesses. Despite SBIR/STTR awardees being eligible to apply for a diversity supplement under the existing supplement program, there are very low rates of participation. The NIH has issued a Request for Information ([NOT-OD-17-008](#)) to better understand the barriers that prevent SBIR/STTR awardees from participating in the existing diversity supplement program and to inform its consideration to develop a new diversity supplement program specific to the SBIR/STTR mechanisms.

Responses to this Request for Information must be submitted to [SmallBizDiversity@nih.gov](mailto:SmallBizDiversity@nih.gov) by **December 16, 2016**. To learn more and to submit a response, visit the [Request for Information](#).

### The Arsenic Sensor Prize Competition

#### Science FEST

December 5 - 8, 2016

**SRP Annual Meeting:** December 5  
Durham, North Carolina

[Website](#)

#### The 17th International Conference of the Pacific Basin Consortium

March 1 - 4, 2017

New Delhi, India

[Website](#)

#### 253rd American Chemical Society National Meeting and Exposition

SRP-Hosted Session: [From the](#)

[Bench to the Field - Evaluating](#)

[Innovative Remediation and](#)

[Detection Technologies](#) (Abstract

Deadline: October 31, 2016)

April 2 - 6, 2017

San Francisco, California

[Website](#)

## GET UPDATES FROM OTHER SRP GRANTEES

To see the latest SRP grantee publications, visit the [SRP publications page](#).

Visit the [SRP Materials for Grantees page](#) for information intended to assist grantees, such as SRP administrative supplements information, SRP best practices, NIEHS logo use, and the Data Collection Form.

The [SRP Events page](#) contains up-to-date SRP grantee and staff events.

The SRP website also has [Search Tools](#) to help you learn more about projects funded by the Program.

## JOIN THE @SRP\_NIEHS KNOWLEDGE NETWORK ON TWITTER

NIEHS uses Twitter, a popular social media tool, for information-sharing through Tweets. Many SRP Centers also have accounts, and it would be great if all participated! Follow us at [@SRP\\_NIEHS](#) to instantly hear

Interested in helping protect our nation's drinking water? EPA and the U.S. Bureau of Reclamation are joining forces to launch the Arsenic Sensor Prize Competition for the development of new technology to detect arsenic in water. Learn more about the upcoming competition in the blog, [We're Sensing a Change in Water Monitoring: Introducing the Arsenic Sensor Prize Competition](#). If you are interested in receiving notifications about the Arsenic Sensor Prize Competition, email [PRIZE@usbr.gov](mailto:PRIZE@usbr.gov) with "Arsenic Sensor Prize Competition" in the subject line to join the email list. The official prize competition announcement will be posted on Challenge.gov.

### **18th Annual HHS SBIR/STTR Conference**

The HHS SBIR/STTR Conference, which will be held **November 15 – 17, 2016 in Orlando, Florida**, helps small businesses in the life science sector learn more about over \$870 million dollars of annual HHS funding that is available to forge academic partnerships and build new businesses based on recently developed biotechnology. Attendees discover how to successfully submit an application; tips for approaching partners and investors; the types of technical assistance programs HHS offers to awardees; and have the chance to discuss specific questions with HHS SBIR and STTR subject-matter experts. Visit the [HHS SBIR/STTR Conference website](#) for more information.

news about the Program, noteworthy publications, events, and job opportunities for trainees.

### **CONTACT INFORMATION**

Need to get in touch with an NIEHS SRP staff member? Check out our [Contact Staff](#) page.