



# Superfund Research Program *e-Posted Notes*

June 9, 2017 (Issue 161)

## HEADLINES

### **SRP Risk eLearning Webinars: Analytical Tools and Methods**

Join us for the third and final session of the spring SRP Risk e-Learning seminar series, [Analytical Tools and Methods](#), on **June 12, 1:00 - 3:00 p.m. EDT**.

In Session III, [Fate and Transport of Contaminants](#), speakers will highlight tools and methods to detect contaminants and measure their fate and transport in the environment. The speakers will highlight work related to polychlorinated biphenyls (PCBs), per- and polyfluoroalkyl substances (PFASs), chlorinated solvents, and other chemicals in the environment. Presenters include **Keri Hornbuckle**, University of Iowa SRP Center; **Jennifer Guelfo**, Brown University SRP Center; and **Mark Brusseau**, University of Arizona SRP Center. Visit the [EPA's CLU-IN Training & Events website](#) for more information and to register.

Thanks to everyone who joined us for the first two sessions! If you missed them, you can view the archived webinars for Session I, [Field-Ready Biosensors to Assess Bioavailability and Toxicity](#), and Session II, [Techniques for Trace Analysis of Metals and Chemical Mixtures](#).

### **Save the Date: SRP 30th Anniversary Meeting**

The [SRP Annual Meeting](#) will be held **December 6 - 8, 2017** in Philadelphia, Pennsylvania. The 2017 meeting will celebrate the 30th anniversary of the program, showcasing SRP's accomplishments to protect human health and the environment. The Penn SRP Center will be hosting the meeting in collaboration with SRP Centers at Boston University, Brown University, Columbia University, Dartmouth College, and Northeastern University.

Program planning is underway, and organizing committees are being formed. We look forward to seeing you in Philadelphia this year to share, compare, and interact with other SRP researchers.

## IN THE NEWS

### **NIEHS SRP News Stories**

## EMPLOYMENT OPPORTUNITIES

### **Postdoctoral Research Associate in Environmental Epidemiology - Boston University**

The Boston University School of Public Health (BU SPH) is offering a postdoctoral research associate opportunity in environmental epidemiology, focusing on the investigation of an epidemic of chronic kidney disease (CKD) in Central America. BU SPH has been [investigating the CKD epidemic](#) since 2009 and is currently launching a large prospective cohort study of workers in Nicaragua and El Salvador. The postdoctoral associate will analyze existing data from past field work in Central America, lead an analysis of electronic medical records and health care claims data from the U.S., and prepare manuscripts for publication. The successful candidate must have recently completed a Ph.D./doctorate in epidemiology, environmental health, or related field; have strong quantitative skills; and have an interest in kidney disease / kidney function. Madeleine Scammell, D.Sc., in the Department of Environmental Health will serve as the primary supervisor. This is a two-year position. Travel in the first year will be limited; there is potential for travel in year two. To apply, send a CV and a letter describing your interests to Madeleine Scammell ([mls@bu.edu](mailto:mls@bu.edu)). Please put

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

- [Arsenic website helps identify sources and reduce exposures](#)
- [Using cutting-edge epigenetic research to inform decision making](#)

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

- [SRP Highlighted at Data Science Symposium](#)
- [SRP Trainees Host Super FUN: Science for a Safer World Booth at Cal Day](#)
- [SRP Researchers Shine at American Chemical Society Meeting](#)

### Airlift Featured in UNL Newsroom Article

Airlift Environmental, an SRP-funded small business, was featured in a University of Nebraska-Lincoln (UNL) article about its innovative technology for groundwater cleanup. The company, which began as an outgrowth of research that started at UNL, focuses on ways of removing industrial solvents and petroleum-based pollutants from groundwater. The company is optimizing the use of oxidant-paraffin candles, a chemical-wax cylinder containing oxidizing compounds, such as potassium permanganate or sodium persulfate, that transform harmful chemicals, like vinyl chloride (VC), trichloroethylene (TCE) and perchloroethylene (PCE), into harmless carbon dioxide and chloride. To learn more about the technology, visit the [UNL news page](#).

### Chief Highlighted in BuzzFeed News Article

The University of Arizona (UA) SRP Center's Community Engagement Core leader Karletta Chief and collaborator Paloma Beamer were recently featured in a BuzzFeed News story on work with Navajo farmers following the Gold King Mine Spill in Colorado. Over the last year and a half, UA scientists have been working to help the Navajo understand the impact of the spill by presenting data about contaminant levels to the community members so they feel empowered to decide whether to start using river water again. Led by Chief and Beamer, the team has collected approximately 1,000 environmental samples, including water and soil from the river and irrigation canals, water from wells and conduits, and samples of blood, urine, and drinking water from homes in nearby communities. Visit the [BuzzFeed News article](#) to learn more.

### Haine Featured in PEPH Podcast

Dana Brown Haine, a science educator with the University of North Carolina (UNC) SRP Center, was highlighted in the May Partnerships for Environmental Public Health (PEPH) podcast for her work to explain bioavailability of arsenic and lead in soils.

"Environmental Epidemiology Postdoctoral Associate" in the subject line. For more information, see the [full announcement](#).

### Postdoctoral Associate in Community Engagement - Boston University

The BU SPH is seeking a Community Engagement (CE) postdoctoral associate to work with [BU Superfund Research Program \(BSRP\) Center](#) and [Center for Research on Social and Environmental Stressors in Housing Across the Life Course \(CRESSH\)](#)

investigators, Core leaders, and community partners to facilitate, evaluate, and document community engagement activities. The successful candidate must have a Ph.D./doctorate in social sciences or in a public or environmental health field; expertise in qualitative research; knowledge of environmental health / environmental epidemiology; and community engagement experience. The primary postdoctoral supervisor will be Madeleine Scammell, D.Sc. This is a two-year position. To apply, send a CV and a letter describing your interests to Madeleine Scammell ([mls@bu.edu](mailto:mls@bu.edu)). Please put "Community Engagement Postdoctoral Associate" in the subject line. For more information, see the [full announcement](#).

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

This two-year 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 the Silent Spring Institute and Northeastern University's Social Science Environmental Health Research Institute (SSEHRI). The fellowship is part of a unique opportunity to

Haine collaborated with researchers at UNC and the University of Arizona to develop a fact sheet to help communicate the complex concept of bioavailability to the public. To listen to the podcast, visit the [NIEHS PEPH Podcast page](#).

## LSU RTC Members Receive Grant for School Outreach Activity

Jen Irving and Maud Walsh of the Louisiana State University (LSU) SRP Research Translation Core (RTC) received an education outreach grant from the International Society for Optics and Photonics (SPIE) to support a learning activity on the basics of particulate matter air pollution for high school and middle school students. They are purchasing supplies so students can build their own pollution detectors using a programmable microcontroller (Arduino), a simple dust sensor, and basic electronics. The [activity](#), developed originally by EPA researchers, provides background information and step-by-step instructions to build the monitor. Students then can test the monitors and identify particulate matter sources.

## TRAINEE SPOTLIGHT

### Jessica Laine Studies Prenatal Metal Exposure at UNC

Jessica Laine recently completed her doctoral degree in epidemiology at the University of North Carolina at Chapel Hill (UNC) under the mentorship of Rebecca Fry and David Richardson. As an SRP trainee, Laine's research focuses on using epidemiological methods to understand the effects and mechanisms underlying prenatal exposure to toxicants, including exposure to inorganic arsenic (iAs) in drinking water. This work includes investigating how nutritional pathways can influence metabolism of iAs – with the goal of reducing iAs-associated adverse birth outcomes.



Laine is the lead author on a recent [paper](#) identifying metabolites in umbilical cord blood that are associated with exposure to iAs in the womb. The findings pinpoint that differences in a mother's metabolism of iAs may influence the metabolomic profile of her baby. (See [Research Brief](#)).

In another [study](#), Laine and her colleagues found that cadmium levels in the placenta during pregnancy are associated with the risk of developing preeclampsia. Preeclampsia complicates pregnancy, as it is one of the major causes of maternal and perinatal mortality and morbidity and may contribute to the

engage in environmental health - social science training. 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.

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. The postdoctoral fellow will spend 2/3 of her/his time at Silent Spring Institute and 1/3 at Northeastern University. The fellow will collaborate with Silent Spring Institute and Northeastern scientists on one or more ongoing research projects and will have access to cutting-edge resources and technologies at Northeastern University and other collaborating institutions.

They are currently seeking applicants for one position to start as soon as possible. Review of applications will begin immediately, and the search will remain open until the position is closed or filled. For more information, see the full job description on the [Silent Spring Institute website](#).

#### Assistant Professor in Environmental Sciences - Louisiana State University

A Tenure Track Assistant Professor in Environmental Sciences position is open at Louisiana State University (LSU). Candidates for this position will be expected to establish a rigorous, extramurally funded research program and teach courses in the field of health physics in the Department of Environmental

development of later-life cardiovascular disease and chronic kidney disease in the child. Laine was also lead author on another [study](#) linking maternal metabolism of iAs to lower newborn birthweight and other negative birth outcomes.

Laine was a [2016 KC Donnelly recipient](#), where she worked with Mary Gamble at the Columbia University SRP Center to expand on her research to investigate the impact of nutrients involved in one carbon metabolism on the methylation of arsenic during pregnancy and the influence of these two factors on infant birthweight. As part of the UNC SRP Center Research Translation Core, Laine worked closely with high school teachers to create lesson plans to explain epigenetic mechanisms of toxicants and disease and also assisted in many other science communication efforts directed at the public.

Laine has received the Early Career Research Fellowship for postdoctoral research at Imperial College London. She will begin work there this summer, continuing in environmental epidemiology with a focus on the exposome.

Laine applies her research passions outside of her work by promoting the use of health and fitness to prevent disease. She is a CrossFit competitor, long-distance cyclist, yogi, runner, and dancer, and she offers nutrition tips as a [food blogger](#).

## HOT PUBLICATION

### Assessing Soil-Air Partitioning of PAHs and PCBs With a New Passive Sampler

In a new [paper](#), researchers from the Oregon State University (OSU) SRP Center present a method to measure time-weighted averages of soil-air concentrations of polycyclic aromatic hydrocarbons (PAHs) and polychlorinated biphenyls (PCBs) in situ using passive sampling and requiring no electricity. They place a box over low-density polyethylene passive samplers deployed 1cm above soil. Passive air samplers were also co-deployed 1.5m above the soil to measure ambient air concentrations. They tested the method near three sites with known concentrations of PCBs or PAHs. According to the authors, this method of measuring soil and air will allow researchers to understand source-sink dynamics at sites with recent and historical contamination and at sites where conventional sampling is challenging.

## AWARD WINNERS

### Jamie Minick Wins Student Platform Presentation Award

OSU SRP Center trainee Jamie Minick received the First Place Student Platform Presentation Award at the 2017 Pacific Northwest Chapter of the Society of Environmental Toxicology and Chemistry Annual Meeting. Minick's presentation focused on hazard assessment of a PAH mixture in the zebrafish

Sciences within the College of the Coast and Environment. Areas of specialization could include medical, environmental, or reactor health physics. This position works closely with the physics department in the College of Science and the Center for Energy Studies.

The position was posted on January 20, 2017 and will remain open until filled. For more information, visit the [LSU jobs website](#).

## CURRENT RESEARCH BRIEF

[Research Brief 270: "Prenatal PCE Exposure and Maternal Alcohol Use Linked to Increased Risks of Teenage Drug Use"](#) (Ann Aschengrau, Ph.D., Boston University)

Past [Research Briefs](#) are available on the SRP website. To receive the monthly Research Briefs or to submit ideas, email Michelle Heacock ([heacockm@niehs.nih.gov](mailto:heacockm@niehs.nih.gov)).

## SRP EVENTS

**SRP Risk e-Learning Web Seminar: Analytical Tools and Methods**  
**Session III - Fate and Transport of Contaminants**  
June 12, 2017 • 1:00 - 3:00 p.m.  
EDT  
Webinar  
[Website](#)

**Highly Fluorinated Compounds – Social and Scientific Discovery**  
Hosted by Northeastern University SRP Center  
June 14 - 15, 2017  
Boston, MA  
[Website](#)

**15th International Congress on Combustion By-Products and Their Health Effects**  
Co-hosted by the Louisiana State University SRP Center

developmental toxicity model.

## David Williams Receives Helen B. Rumbel Professorship

OSU SRP researcher David Williams was recently named the Helen P. Rumbel Professor for Cancer Prevention at OSU. Williams joined the faculty of the College of Agricultural Sciences at OSU in 1987 and emerged as an outstanding scholar, instructor, and leader. He was instrumental in developing new research programs and initiatives, including the OSU SRP Center, and is an internationally recognized leader in the fields of toxicology and carcinogenesis. He was honored along with other Endowed Professors at the Celebration of Outstanding Faculty dinner.

## WEBINARS AND TRAININGS

### Applied Bioinformatics Course

The Applied Bioinformatics Course 2017 will be held **July 15 - 20, 2017** at the MDI Biological Laboratory in Bar Harbor, Maine. Applied Bioinformatics is a hands-on course for advanced graduate students, postdoctoral trainees, and researchers at all levels interested in incorporating bioinformatics into their research. Dartmouth SRP Center Director Bruce Stanton is the course co-director.

The goal is to provide hands-on training on major bioinformatics resources through the analysis of an RNA-Seq dataset to find differentially expressed genes and to investigate previously described functions of those genes and the pathways in which they are involved.

Topics include web-based gene and protein resources, genome browsers, pathways and gene set enrichment analyses, and RNA-Seq data analysis. RNA-Seq data analysis will be conducted using CLC Genomics Workbench, the web-based Galaxy system, R statistical computing environment, and Ingenuity Pathways Analysis. The course will feature several modules that will have examples demonstrating how to apply the major tools or resources featured in the module. Participants should have a strong background in molecular biology. Prior computer programming skills are not required, but participants need to have a strong interest in learning some programming concepts.

Visit the [MDI Biological Laboratory website](#) for more information on the course and to register.

## FUNDING OPPORTUNITIES

### Support for Conferences and Scientific Meetings (R13)

The SRP participates in [NIH Support for Conferences and Scientific Meetings \(Parent R13/U13\)](#). The Program is interested in supporting investigator-initiated scientific meetings that will advance the field of environmental health sciences and the mission of the SRP.

June 27 - 30, 2017

Seoul, South Korea

[Website](#)

### 13th International Conference on Mercury as a Global Pollutant Co-hosted by the Dartmouth SRP Center

July 16 - 21, 2017

Providence, Rhode Island

[Website](#)

### 254th ACS National Meeting & Exposition

August 20 - 24, 2017

Washington, DC

[Website](#)

### Dioxin 2017

August 20 - 25, 2017

Vancouver, Canada

[Website](#)

### 1st Annual National Native Health Research Training Conference

September 18 - 20, 2017

Denver, Colorado

### SETAC North America Annual Meeting

November 12 - 16, 2017

Minneapolis, Minnesota

[Website](#)

### SRP Annual Meeting

December 6 - 8, 2017

Philadelphia, Pennsylvania

[Flyer](#)

## 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 helpful information, such as SRP administrative supplements information, SRP best practices, guidelines for NIEHS logo use, and the Data Collection Form.

See the [SRP Science Digest](#) to read more about recent SRP research highlights and activities.

The next receipt date for R13 applications is **August 12, 2017**. However, if you are interested in applying, a letter requesting permission to submit an application is due by **July 1, 2017**. Visit the [NIEHS Support for Conferences and Scientific Meetings \(R13\) website](#) for more information. Please direct any questions to Brittany A. Trottier ([brittany.trottier@nih.gov](mailto:brittany.trottier@nih.gov)).

## Environments Travel Award

The journal [Environments](#) is inviting applications and nominations for the 2017 Travel Award. The aim of the award is to encourage and motivate young researchers in the field of environmental science and engineering. The award of 800 Swiss Francs will be granted to a postdoctoral fellow or Ph.D. student to attend an international conference August 1, 2017 - December 31, 2018 and to present his/her research.

Applications are due **June 30, 2017**. For more information, visit the [Environments awards page](#).

## USDA Seeks Applications for Community Development Grants

The U.S. Department of Agriculture (USDA) is inviting applications for grants to support economic development in rural communities. These grants will support partnerships between community development groups and rural communities to develop essential facilities and to create jobs and business opportunities. USDA is making grants available under the [Rural Community Development Initiative](#) (RCDI) to strengthen the rural economy. Qualified intermediary organizations receiving RCDI grants will provide technical assistance and training to help nonprofit organizations and communities develop their capacity to undertake housing, community facilities, or economic development projects. Eligible recipients are nonprofit organizations, low-income rural communities, or federally recognized tribes. RCDI grants are not provided directly to businesses or individuals.

For more information on how to apply, see the May 26 [Federal Register](#). The deadline to submit paper applications is **July 25, 2017**.

## INTERAGENCY NEWS

### EPA Seeks Nominations for Board of Scientific Counselors

The U.S. Environmental Protection Agency is seeking nominations for technical experts to serve on its Board of Scientific Counselors (BOSC), a federal advisory committee to the Office of Research and Development (ORD). The BOSC provides independent scientific and technical peer review, consultation, advice, and recommendations for each of its research programs.

The [SRP Events page](#) contains information about upcoming meetings, seminars, and webinars.

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 [@SRP\\_NIEHS](#) to instantly hear 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.

Visit the [BOSC website](#) for more information on the BOSC and its subcommittees. Individuals and organizations can nominate themselves or others by using the [nomination form](#) on the BOSC website. The nomination period is open until **June 30, 2017**.

## **NIH Data Commons Pilot Phase Explores Using the Cloud to Access and Share FAIR Biomedical Big Data**

The NIH, under the Big Data to Knowledge (BD2K) program, will be launching a Data Commons Pilot Phase to test ways to store, access, and share FAIR (Findable, Accessible, Interoperable, and Reusable) biomedical data and associated tools in the cloud.

A data commons is a way to share and provide access to digital objects, like the data generated during biomedical research, or the software and other tools needed to use the data. A commons would help NIH extract more value from the digital products of biomedical research by making them available to more researchers. Using a cloud-based data commons model will empower researchers to find and interact with data directly in the cloud without spending time and resources downloading large datasets to their own servers. For more information, visit the [NIH BD2K Commons website](#).