

# Superfund Research Program e-Posted Notes

August 5, 2016 (Issue 151)

## HEADLINES

### 2016 K.C. Donnelly Winners Announced

Congratulations to the six exceptional SRP trainees who received a 2016 K.C. Donnelly Externship Award Supplement to enrich their research in environmental health science. The award provides the SRP trainees with funding for an externship (up to three months) at other SRP centers, government laboratories, and state, local, or tribal agencies to support transdisciplinary research and collaboration.

The 2016 winners are: Sara Flanagan (Columbia University SRP), Angela Gutierrez (University of Kentucky SRP), Jessica Laine (University of North Carolina SRP), Ralph Pietrofesa (University of Pennsylvania SRP), Aditi Sengupta (University of Arizona SRP), and Renee Wurth (Northeastern SRP).

For more on the winners and information about their externships, visit the [SRP K.C. Donnelly 2016 Winners page](#).

### NIEHS Environmental Health Science FEST

The first ever NIEHS Environmental Health Science FEST (EHS FEST) is just around the corner! We envision the meeting as 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. Here are a few updates with links to the submission pages:

**Dates:** December 5 - 8, 2016

**Location:** Durham Convention Center

**Registration for EHS FEST** is opening soon! Keep your eyes open for additional information and make sure to check out the [EHS FEST webpage](#) for the latest updates. The deadline to submit an online form to be a part of the poster session, film festival, and sensor fair has been extended to **Friday, September 16**.

- **Poster Session:** The poster session will be a great opportunity for you, your trainees, collaborators, and/or community partners to highlight your environmental health science projects. We are seeking poster submissions that

## EMPLOYMENT OPPORTUNITIES

### National Cancer Institute - Cancer Prevention Fellowship Program

The application period is now open for the National Cancer Institute (NCI) Cancer Prevention Fellowship Program. The overarching goal of the Cancer Prevention Fellowship Program is to provide a strong foundation for scientists and clinicians to train in the field of cancer prevention and control.

As part of the program, they offer training toward an MPH degree at an accredited university during the first year, followed by mentored research with investigators at the NCI or the Food and Drug Administration. To be considered for the fellowship, you must have a doctoral degree or must be currently enrolled in an accredited doctoral degree program with the understanding that all requirements will be completed before the start of the fellowship.

The deadline for all applications is **August 25, 2016**. For more information, visit the [NCI Cancer Prevention Fellowship Program website](#).

### Director, EPA Integrated Systems Toxicology Division

The EPA Office of Research and Development (ORD) is seeking an internationally recognized science leader for the position of Director, Integrated Systems Toxicology

cover a wide range of environmental health topics.

- **Film Festival at the Historic Carolina Theatre:** The film festival presents a unique occasion to share videos (no longer than 15 minutes) that explain, discuss, and raise awareness about environmental exposures and how they relate to human health.
- **Sensor Fair:** The EHS Sensor Fair is a great opportunity for sensor developers funded by NIEHS and other agencies to showcase their cutting-edge technologies and meet with leading scientists and end users.

## Now Accepting SRP Wetterhahn Applications

The NIEHS SRP is accepting applications for the 19th Annual SRP Wetterhahn Award. The deadline this year for applications is **August 31, 2016**.

The winner will be announced and will present his/her work during the NIEHS Environmental Health Science FEST, which will replace the SRP Annual Meeting this year. The EHS FEST will be held in Durham, N.C., December 5 - 8, 2016. (Monday, December 5, will be dedicated to SRP-related events.)

The SRP has established this annual award to recognize an outstanding SRP graduate student or post-doctoral researcher who best demonstrates the qualities of scientific excellence exhibited by Dr. Karen Wetterhahn, who passed away in 1997. The award is open to all SRP trainees to apply (an SRP trainee is either funded directly by an SRP grant (P42 or R01) or is conducting research/activities funded by SRP).

Please see the [Wetterhahn Web page](#) and [application guidelines](#) for additional information. You can also view bios from past winners on the website. Note: the deadline was previously set to July 1 to August 1 of each year; it will resume next year to this deadline.

## Upcoming Trainee Webinar: NSF Opportunities

We encourage all trainees to join us for a webinar on **August 15 at 2 pm ET** to discuss National Science Foundation (NSF) opportunities for trainees. After a successful webinar on [NIEHS grant opportunities](#), trainees were interested to hear about other academic fellowships and grant opportunities specifically geared toward graduate students and postdoctoral fellows. This session will highlight opportunities through the NSF. Carol Van Hartesveldt, a senior program officer at NSF, will provide a broad overview of the NSF and discuss opportunities for graduate students. Two current SRP grantees, Staci Simonich (Oregon State University) and David Kaeli (Northeastern University), will then discuss their experiences writing and reviewing NSF grants. To register for the webinar, visit the [WebEx page](#).

We also encourage you to save the date for the next trainee webinar on **September 21 at 2 pm ET**. On this webinar, we will

Division, [National Health and Environmental Effects Research Laboratory \(NHEERL\)](#) in Durham, NC. NHEERL conducts systems-based, effects research needed to achieve sustainable health and wellbeing. The laboratory is responsible for formulating and implementing a comprehensive research program to investigate the effects of environmental pollutants and other anthropogenic stresses on human health and the ecosystems in which we live. NHEERL scientists utilize a broad range of molecular-, cellular- and animal-based experimental approaches and computational models in support of the Agency's health and ecological risk assessment processes.

The deadline for applications is September 2, 2016. For more information about the position and qualifications, visit the [USA Jobs announcement](#).

## Northeastern University and Silent Spring Institute - Postdoctoral Fellow

Northeastern is seeking a candidate with doctoral training in an environmental health-related discipline such as exposure assessment, molecular or computational toxicology and biology, environmental chemistry, statistics, bioinformatics, or epidemiology. In addition, this fellowship is part of a unique environmental science-social science collaboration, and the candidate should have an interest in working in a public health context and receiving training in community-based participatory research and the social context of environmental science. This two-year appointment will be part of the new NIEHS Training Program, "Transdisciplinary Training at the Intersection of Environmental Health Science and Social Science" (EH+SS), co-directed by Silent Spring Institute

hear from two current [AAAS Science and Technology Policy Fellows](#), Wendy Heiger-Bernays, the Research Translation Core leader at Boston University, and Brad Newsome, a former trainee from the University of Kentucky SRP. They will discuss their experiences and lessons learned during their AAAS Science and Technology Policy Fellowships.

## 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:

- [Anniversary event highlights Superfund and disaster response programs](#)
- [Community guide for eating fish from North Carolina's Triangle area](#)
- [Possible new marker and therapeutic target for liver cancer](#)

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

- [PROTECT Expands to Investigate Zika in Infants and Pregnancy](#)
- [SRP Small Businesses Featured at International Biotech Convention](#)

### It Came from Beneath: Detecting and Mitigating Vapor Intrusion

SRP staff and grantees were recently highlighted in an Environmental Health Perspective feature article on detecting and mitigating vapor intrusion. Kelly Pennell (University of Kentucky SRP), Eric Suuberg (Brown SRP), and Wendy Heiger-Bernays (Boston SRP) were all quoted in the feature for their work related to understanding and communicating the risks of vapor intrusion, as well as identifying ways to reduce that risk. SRP Director Bill Suk was also quoted in the article, who emphasized the importance of working in multidisciplinary teams to address the complex issues surrounding vapor intrusion. To read the article, visit the [Environmental Health Perspectives website](#).

### Birnbaum Visits Northeastern SRP Center

In July, NIEHS Director Linda Birnbaum visited Northeastern University to discuss their NIEHS-funded environmental health projects. At a meeting with Northeastern University leaders, participants discussed the Northeastern SRP Center, [Puerto Rico Testsite for Exploring Environmental Threats](#) (PROTECT), as well as their new [Center for Research on Early Childhood Exposure and Development in Puerto Rico](#) (CRECE). The event included a talk by Birnbaum on [the goals of the NIEHS](#) and information about some of the research that has been sponsored by NIEHS (including research from PROTECT and CRECE) that has suggested the danger common chemicals in our environment can

and Northeastern University's Social Science Environmental Health Research Institute. The postdoctoral fellow will spend 2/3 of her/his time at Silent Spring Institute and 1/3 at Northeastern. The fellow will collaborate with Silent Spring Institute scientists to contribute to ongoing research in environmental health and engage with social scientists at Northeastern working at the intersection of social science and environmental health. For more information, visit the [Northeastern University jobs page](#).

### Senior Research Scientist - Northeastern University

The Northeastern University PROTECT Center is seeking a Senior Research Scientist/Engineering with experience and a focus on environmental health, specifically one or more of the following: health informatics, geospatial informatics, and environmental epidemiology. This individual will work closely with scientists from different disciplines across multiple institutions to analyze large, complex environmental/biological datasets. This position requires a Ph.D. or equivalent in Environmental Engineering, Epidemiology, Biostatistics, Geology, Biomedical or other related quantitative fields with 3-6 years of experience, which includes progressively more responsible, independent research work evidenced by publications, inventions, or equivalent efforts. See the [Northeastern University jobs page](#) for more information.

### CURRENT RESEARCH BRIEF

Research Brief 260: [Identifying Mechanisms for Regulating Gas Exchange in Plants](#) (Julian Schroeder, University of California, San Diego) is available online.

pose to human health. Visit the [Northeastern SRP Center news page](#) to read more.

## Duke Publication Featured on Cover of Toxicological Sciences

A Duke SRP publication led by Joel Meyer was featured on the cover of the August 2016 edition of Toxicological Sciences. The paper, [Arsenite Uncouples Mitochondrial Respiration and Induces a Warburg-like Effect in Caenorhabditis elegans](#), is an exploration of the mechanisms of arsenic toxicity in mitochondria. The [cover photo](#) shows the mitochondrial membrane potential in *C. elegans* pharyngeal bulb from the research.

## UA SRP Training Discussed in Desert Leaf Magazine Article

University of Arizona SRP Center community outreach and education on dust and air pollution is discussed in the article, [Not Just Dust](#), featured in the July/August 2016 edition of Tucson's [Desert Leaf Magazine](#). This article describes the efforts of promotoras, or community health advocates, working with the Sonora Environmental Research Institute (SERI) to educate the local community on air quality issues, and refers to the [promotora training](#) provided by UA SRP and the UA's Dean Cater Binational Center for Environmental Health.

## Supporting the Duwamish Valley Youth Corps

The University of Washington SRP Community Engagement Core staff are partnering with the [Duwamish Valley Youth Core \(DVYC\)](#) to bring a new cohort of youth participants to campus for laboratory tours that includes a component featuring a pathway to college. A Latina Youth Ambassador from the Office of Minority Affairs, who is an undergraduate student and first-generation college attendee met with a cohort of 21 teens from the Georgetown and South Park neighborhoods, adjacent to the Lower Duwamish Waterway Superfund site in June and the youth engaged in activities that illustrated concepts of exposure, dose, risk and individual susceptibility. Their DVYC curriculum emphasizes mindfulness and protection human health.

## TRAINEE SPOTLIGHT

### Lindsey Butler - Boston University

Boston University (BU) SRP trainee Lindsey Butler is a Ph.D. student in the department of environmental health under the guidance of Dr. Ann Aschengrau and Dr. Patricia Janulewicz, a previous BU Superfund Trainee. Lindsey works on the BU Children's Health

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

**Joint National and International Workshop on Chronic Kidney Disease of Unknown Etiology (CKDu) to Recommend a CKDu Policy, Research Agenda, and an Action Plan**

August 11-20, 2016  
North Central Province, Sri Lanka

**Elongate Mineral Particle Workshops**

September 7 - 9, 2016  
Bethesda, Maryland  
[Website](#)

**13th International Phytotechnologies Conference: Plant-Based Solutions for Environmental Problems from Lab to Field**

September 26-28, 2016  
Hangzhou City, Zhejiang Province, China  
[Website](#)

**The 9th PCB Workshop: PCB Risk Evaluation and Environmental Protection**

October 9-13, 2016  
Kobe, Japan  
[Website](#)

**North Carolina Society of Toxicology Annual Meeting**

October 25, 2016  
Research Triangle Park, North Carolina  
[Website](#)

**Society of Environmental Toxicology and Chemistry (SETAC) North America 37th**

Study to assess prenatal exposure to tetrachloroethylene (PCE)-contaminated drinking water in Massachusetts and Rhode Island.



From 1968 to 1990, families across New England were exposed to PCE when it leached into their drinking water from the vinyl-lining of asbestos cement water distribution pipes. Animal and human studies have found that prenatal exposure to PCE, the related solvent trichloroethylene (TCE), and their metabolite trichloroacetic acid (TCA) increase the risk of birth defects and stillbirths. As part of the BU Children's Health Study, Butler and colleagues are identifying historical locations of vinyl-lined asbestos cement water pipes and investigating the relationship between exposure to PCE and several types of birth defects and stillbirths.

This year, Butler and her advisor, Aschengrau, were featured in a [Boston Museum of Science podcast](#) that explored their work to assess prenatal exposure to drinking water contaminated by PCE. She also participated in a mini-symposium sponsored by BU SRP entitled "Preventing the Next Flint." At the symposium, researchers and partners focused on water safety and reflected on how water safety can go wrong scientifically, politically, and socially. Butler and her research was featured in a [BU School of Public Health story](#) following the event. She also recently published a discussion piece in the journal *Environmental Justice* on the role of regulatory failure and environmental injustice in the Flint water crisis. In addition to her drinking water studies she works to help her colleagues in other disciplines apply the exposure assessment techniques of environmental health to answer other complex public health questions, a task she is very passionate about.

As a Masters student, Lindsey served for two years as a Mentor Scientist at *Science Club for Girls*, a Boston area non-profit aimed at promoting scientific literacy and sisterhood in young women in underserved communities. When she is not teaching and conducting her research she enjoys yoga, paddle boarding, and walking her two German Shepherds, Rocky and Lola.

**HOT PUBLICATION**

#### **Annual Meeting**

November 6-10, 2016

Orlando, Florida

[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](#)

#### **NIEHS Environmental Health Science FEST**

December 5-8, 2016

Durham, North Carolina

[Website](#)

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

March 1 - 4, 2017

New Delhi, India

[Website](#)

#### **UPDATES FROM OTHER SRP CENTERS**

The e-Posted isn't the only way you can find out about news and events from the SRP Centers. The [SRP Grantee Newsletters and Pages website](#) has links to SRP Center electronic newsletters and Facebook pages. Check it out to see the latest SRP news!

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

## A Five-year Performance Review of Field-scale, Slow-release Permanganate Candles

In a recent [paper](#) in the journal Chemosphere, researchers led by SRP small business grantee Mark Christenson described their work to develop permanganate-paraffin candles to treat trichloroethylene (TCE). Christenson leads an SRP SBIR grant for the small business Airlift Environmental, in partnership with the University of Nebraska.

In 2009, the research team identified a TCE plume at an abandoned landfill that was located in a low permeable silty-clay aquifer. To treat the TCE, they manufactured slow-release potassium permanganate cylinders, which would be inserted below the surface into groundwater with direct-push rods. In this paper, they provide a review since installation and compared two methods of inserting the candles into a low permeable aquifer.

Their field-scale results document efficacy of oxidant candles to degrade volatile organic compounds. They then developed and tested second-generation oxidant candles and found that adding anti-scaling agent improves oxidant candle release characteristics and should reduce the need to perform maintenance on candles placed in wells, providing greater longevity for candles inserted by direct-push.

## AWARD WINNERS

### Gunsch Receives Prestigious Huber Research Prize

Duke SRP Center researcher Claudia Gunsch has won the [2016 Walter L. Huber Civil Engineering Research Prize](#) from the American Society of Civil Engineers. Gunsch was recognized for pioneering the development of gene silencing based water disinfection technology, significantly contributing to genetic bioaugmentation technology for the in situ bioremediation of organic contaminants, and advancing our understanding of the effect of emerging contaminants on biological wastewater treatment. For more information about Gunsch's work and her award, visit the [Duke news website](#).

### Artiola receives Arizona Department of Health Services Funding for Well Water Workshops

Janick Artiola, University of Arizona (UA) SRP Center Research Translation Investigator and Extension Water Quality Specialist, recently received a grant from the Arizona Department of Health Services (ADHS) to support UA SRP's efforts to support communities served by small drinking water systems, including private wells, not covered by the Federal Safe Drinking Water Act (SDWA). The grant will provide funding to support: 1) updates to the [Arizona Well Owner's Guide to Water Supply](#), first published in 2009 and available on the UA SRP website, 2) the provision of four well water workshops in which ADHS will participate and offer home well testing kits, 3) a review of existing well water data

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 [@SRP\\_NIEHS](#) to instantly hear news about the Program, noteworthy publications, events, and job opportunities for trainees.

## CONTACT INFORMATION

Information on NIEHS SRP Program Contacts can be found here: [NIEHS SRP Program Staff and Contacts](#).

for private wells in Arizona, 4) workshop evaluations involving the administration of surveys to workshop participants, and 5) participation in an ADHS-organized webinar. Artiola has been providing workshops to private well owners since 2009. For more information about Artiola's work and the grant, visit the [UA SRP website](#).

### **Di Giulio Awarded Distinguished Professorship**

Duke SRP Director Richard Di Giulio was one of four professors awarded distinguished professorships at the Nicholas School of the Environment at Duke University. Di Giulio's studies focus on the molecular and organismal responses of aquatic animals to contaminants and other environmental stressors. Through more than 150 peer-reviewed papers, his work has advanced scientists' understanding of the mechanisms of contaminant metabolism, adaptation and toxicity in model species, and furthered efforts to devise new tools for assessing risks in the wild. In his lab at the Nicholas School and through his role as director of the Duke Superfund Research Center and the university's Integrated Toxicology and Environmental Health Program, he collaborates on numerous long-term interdisciplinary studies to shed light on links between ecosystem and human health.

### **Brusseau Named 2016 Geological Society of America Fellow**

University of Arizona (UA) SRP Principle Investigator, Mark Brusseau, was elected as a Fellow of the Geological Society of America (GSA) in June 2016. Since starting his academic career in environmental geology and watershed hydrology, Brusseau has evolved into a leading specialist in the field of contaminant transport and has made widely-recognized advances in the areas of soil and groundwater contamination characterization and remediation. As the original PI for the UA SRP Center Research Translation Core, Brusseau has also provided technical expertise on Community Advisory Boards for local Superfund sites, served on the Advisory Board for the Arizona Water Quality Assurance Revolving Fund (WQARF), developed informational materials for the public, and held workshops for K-12 teachers. Brusseau is also an existing Fellow of the American Geophysical Union and of the Soil Science Society of America.

## **WEBINARS**

### **Risk e-Learning SRP Water Innovation Series Comes to an End**

Thank you to everyone who attended and participated in the recent SRP Risk e-Learning seminar series, SRP Water Innovation - An Integrated Approach to Sustainable Solutions.

The series focused on introducing challenges and opportunities related to drinking water, technologies for water remediation, water detection technologies, and communicating risk and engaging communities around arsenic and private well testing.

The feedback from the series was positive, and we were pleased with the interest that the seminar attracted. The series drew more than 500 participants who represented a wide-variety of environmental professionals from federal and state regulatory agencies to environmental firms and universities.

If you weren't able to attend the webinars, archives along with information about each session are available on the [Risk e-Learning page](#).

## CALL FOR ABSTRACTS

### **The 8th Princess Chulabhorn International Science Congress - Abstracts Due September 15**

The 8th Princess Chulabhorn International Science Congress Program will be held in **Bangkok, Thailand November 13-17**. The theme of the conference is inter-linkages among the environment, chemicals, and infectious agents. The scientific program will cover chemical and infectious agents, exposure, diseases resulting from environmental exposures, mechanisms and pathways of disease development, modifiers of susceptibility and disease outcomes, tools and technologies for environmental health, and new and emerging therapies. Many of our Superfund Research Program colleagues will be presenting their exciting work at this meeting!

All participants are invited to submit abstracts for platform or poster presentations by **September 15**. For more information, visit the [Princess Chulabhorn International Science Congress website](#). For questions about the meeting, please email [srp-info@nih.gov](mailto:srp-info@nih.gov). In the subject line, please write "Question about Chulabhorn Meeting."

## FUNDING OPPORTUNITIES

### **SRP SBIR/STTR Funding Opportunity Due September 6**

The NIEHS SRP Small Business Innovation Research and Small Business Technology Transfer Grants (SBIR/STTR, R41, R42, R43, R44) are awarded to foster the commercialization of technologies, products, and devices developed by the SRP and others.

The next HHS SBIR/STTR application deadline is just one month away on **Tuesday, September 6, 2016 at 5 pm local time**. (Note - the standard deadline falls on September 5, a federal holiday, so the revised deadline is September 6). The standard due dates occur on September 5, January 5, and April 5. You can find all solicitations on the [NIH SBIR/STTR Funding page](#).

**Make sure you are registered!** All registrations must be completed prior to the application being submitted, and the System for Awards Management (SAM) registration must be updated annually. Visit the [NIH Electronic Submission Process for Grants page](#) to learn more.

Please see the [Hazardous Substances Detection and Remediation Program page](#) for more information on the SRP SBIR/STTR grants. See the [NIH SBIR/STTR webpage](#) for additional application information as well as other SBIR/STTR opportunities within NIEHS. If you are interested in applying, please contact Heather Henry at [henryh@niehs.nih.gov](mailto:henryh@niehs.nih.gov) or (919) 541-5330.

### **Big Data to Knowledge Opportunities**

The NIH [Big Data to Knowledge Initiative](#) (BD2K), together with the Division of Mathematical Sciences at NSF, announces the release of a new program solicitation: [Joint NSF/NIH Initiative on Quantitative Approaches to Biomedical Big Data \(QuBBD\)](#). This program is designed to support novel mathematical, statistical, or computational approaches to biomedical big data challenges. Collaborative efforts that bring together quantitative scientists and biomedical researchers are a requirement for this program and must be convincingly demonstrated in the proposal. The due date for full proposals is **September 28**.

### **Revolutionizing Innovative, Visionary Environmental Health Research (RIVER) (R35)**

The NIEHS Revolutionizing Innovative, Visionary Environmental health Research (RIVER) program seeks to provide support for outstanding investigators in the environmental health sciences, giving them intellectual and administrative freedom, as well as sustained support to pursue their research in novel directions in order to achieve greater impacts. The program seeks to identify individuals, regardless of career stage, with a track record of innovative and impactful research and combine their existing investigator-initiated research into a single seven-year award with direct costs of up to \$750,000 based on current NIEHS funding. Letters of intent are due **September 24, 2016**. Applications are due **October 24, 2016** by 5:00 pm local time of the applicant organization. For more information, visit the [RIVER Funding Opportunity Announcement](#).

