



# Superfund Research Program *e-Posted Notes*

September 8, 2017 (Issue 164)

## HEADLINES

### The SRP Welcomes New and Returning SRP Centers

We would like to welcome new Centers at Massachusetts Institute of Technology, Texas A&M, University of Louisville, University of New Mexico, and University of Rhode Island.

And, welcome back to newly funded Centers at Boston University, Columbia University, Duke University, University of Arizona, University of California (UC) Berkeley, UC Davis, UC San Diego, and University of Washington.

### Registration Now Open: SRP 30th Anniversary Meeting

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

Discounted [early bird ticket pricing](#) is valid through **September 30**. All ticket types will increase by \$100 on October 1. Conference registration ends on **October 21**.

The deadline for [submitting abstracts](#) for oral presentations and the poster session is **September 30**. Hotel reservations are available at the [Loews Hotel](#).

### SRP Symposium at ACS

SRP would like to thank the presenters of the SRP-organized American Chemical Society symposium, "Economic impact of environmental health research: A case study of the NIH/NIEHS Superfund Research Program," held August 23. The symposium was a great success! Please look for more news about this symposium next month.

SRP presenters included **Dibakar Bhattacharyya**, University of Kentucky; **Benjamin Bostick**, Columbia University; **Alexis Carpenter**, AxNano; **Neal Durant**, Geosyntec; **Upal Ghosh**, University of Maryland, Baltimore County; **Roger Giese**, Northeastern University; **Keri Hornbuckle**, University of Iowa;

## EMPLOYMENT OPPORTUNITIES

### Ph.D. Candidate – Norwegian Geotechnical Institute

The Norwegian Geotechnical Institute (NGI) is seeking a PhD candidate for a 3-year position on the project "Reducing the impact of fluorinated compounds on the environment and human health" funded by the Norwegian Research Council. The candidate will hold a master's degree, ideally within environmental geochemistry. Experience related to the fate and transport of organic chemicals in the geo-environment is desirable. The position opens the possibility for extended research visits to project partners in America and the Netherlands. Fluent spoken and written English is essential, Norwegian is advantageous. Applications are due **October 15**. For more information, see the [full announcement](#).

### 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

**Yishan Lin**, Northeastern University; **Frank Loeffler**, University of Tennessee, Knoxville; **Dogus Meric**, Geosyntec; **James Minick**, Oregon State University; **Athena Nghiem**, Columbia University; **Kelly Pennell**, University of Kentucky; **Kristen Prossner**, Virginia Institute of Marine Science; **Ljiljana Rajic**, Northeastern University; **William A. Suk**, NIEHS; **Eric Suuberg**, Brown University; **Michael Unger**, Virginia Institute of Marine Science; and **Hongyi Wan**, University of Kentucky.

## Disaster Response: Harvey

SRP sends our thoughts to those impacted by Tropical Storm Harvey. We would also like to encourage all grantees to utilize the [Data Collection Form](#) to let us know about activities in real time, including disaster response activities. Your reporting is instrumental to NIEHS's role in coordinating with other agencies during natural or manmade disasters.

## Save the Date: Risk e-Learning Fall Webinar

The first session of the fall SRP Risk e-Learning webinar series will be held **October 11, 1- 3 pm ET**. The session will focus on adverse outcome pathways (AOPs), which are structured ways to represent biological events leading to adverse health effects. Stephen Edwards and Dan Villeneuve from the U.S. Environmental Protection Agency (EPA) will provide an introduction and overview of AOPs and the [AOP wiki](#), a central repository for AOPs developed as part of a joint effort between the European Commission - DG Joint Research Centre and EPA. More information and registration is coming soon!

## 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:

- [Pregnant moms' response to arsenic linked to sex of fetus](#)

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

- [SRP-Funded FACETS Program Prepares Undergraduates for Advanced Education](#)
- [SRP Small Business Featured at International Biotechnology Convention](#)
- [Conference Helps Scientists Inform Policies Around Mercury Pollution](#)
- [Tabletop Water Pitcher Filter Can Effectively Remove Arsenic from Drinking Water](#)

### Former Wetterhahn Winner Discusses Toxic Emissions Concerns After Harvey

Elena Craft, a former Duke SRP trainee and Wetterhahn winner, was featured in a recent [National Public Radio story](#) on concerns

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 "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 \(BU SRP\) 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.

of plant emissions in the aftermath of Tropical Storm Harvey. The city of Houston is home to around 450 petrochemical plants, making it one of the biggest oil refining hubs in the world.

Craft is a toxicologist with the Environmental Defense Fund (EDF). EDF is keeping track of regulatory filings petrochemical companies are required to make with the Texas Commission on Environment Quality. Right now, the group estimates about a million pounds of toxic chemicals — many of them carcinogenic — will be released around Houston just as a result of the storm and floods.

### Pezzoli Featured in PEPH Story

UC San Diego SRP grantee Keith Pezzoli was recently the topic of an [NIEHS Partnerships for Environmental Public Health grantee highlight](#). Pezzoli, director of the Urban Studies and Planning Program, and teaching professor in the Department of Communication UC San Diego, is committed to community-engaged research and cross-disciplinary partnerships that support bioregional planning. This approach aims to create healthy places and healthy people by recognizing how cities and neighborhoods are embedded in their larger geographical region.

Pezzoli leads the Community Engagement and Research Translation Cores of the UCSD SRP Center. With the UCSD SRP Center, he is also involved in partnerships to help reduce exposures to hazardous wastes and to improve environmental public health in the San Diego-Tijuana border region. He uses community-based participatory approaches to engage and learn from community leaders.

### New Web Tool for Meta-Analysis of Publicly Available Gene Expression Data

Dartmouth SRP Center researchers and colleagues have developed ScanGEO, a simple, user-friendly web application designed to mine high-throughput gene expression data deposited in NCBI's gene expression omnibus (GEO). The Web tool is described in a recent [article](#) in the journal Bioinformatics.

### Columbia SRP Grantees Author EHP Commentary on Private Well Water Screening

Universal screening, achieved through local testing requirements complemented by greater community engagement targeting biologically and socioeconomically vulnerable groups, would reduce population arsenic exposure greater than any promotional efforts to date. These conclusions were described by Columbia SRP Center grantees Yan Zheng and Sara Flanagan in a recent [Environmental Health Perspectives Commentary](#).

Research at the Columbia SRP Center has identified behavioral, situational, and financial barriers to households managing their own well water safety, resulting in far from universal screening despite traditional public health outreach efforts. They also have

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 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

observed significant socioeconomic disparities in arsenic testing and treatment when private water is unregulated. Testing requirements can be a partial answer to these challenges. According to Zheng and Flanagan, universal screening of private well water will identify the dangers hidden in America's drinking water supply and redirect attention to ensure safe water among affected households.

## Brown SRP Researchers Test Rhode Island Water Systems for PFASs

Researchers from the Brown University SRP Center are partnering with the Rhode Island Department of Health (RIDOH) to test 35 of the state's water systems for a group of chemicals known as per- and polyfluoroalkyl substances (PFASs). The new testing program, described in a [recent Brown University press release](#), follows up on previous tests that RIDOH performed in between 2013 and 2015. Jennifer Guelfo, a postdoctoral researcher in Brown's School of Engineering and a member of the Brown SRP Center, has spent eight years researching PFASs and will lead the water system sampling effort.

## Van Geen Featured in Story on Arsenic in Bangladesh

Columbia SRP Center grantee Lex Van Geen was featured in a [story](#) in The Indian Express about work at Columbia to develop a mobile-based mapping application to help Department of Public Health Engineering employees collect and input data on wells using a smartphone or tablet.

## TRAINEE SPOTLIGHT

### Jordan Kozal Studies Ecotoxicology at Duke University

Jordan Kozal is a graduate student at the Duke University SRP Center under the guidance of Rich Di Giulio. Her research focuses on the maternal and cross-generational toxicity of polycyclic aromatic hydrocarbons (PAHs), with important applications in both human disease etiology and organismal ecological fitness.



The ability of PAHs to have effects across generations is an emerging concern in human and wildlife health; however, the underlying mechanisms are poorly understood. Kozal is characterizing the contributions of mitochondrial dysfunction and oxidative stress to the cross-generational toxicity of PAHs. Specifically, she is investigating the associated

University and other collaborating institutions.

They currently are 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](#).

## CURRENT RESEARCH BRIEF

**Research Brief 273: "Susceptibility to Arsenic-induced Skin Lesions Influenced by DNA Differences"**  
(Habibul Ahsan, Ph.D., Columbia 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

**Global Environmental Health Day 2017**  
September 15, 2017  
Research Triangle Park, North Carolina  
[Website](#)

**Engaging Diverse Partners: Strategies to Address Environmental Public Health**  
**A Joint NIEHS meeting of the Partnerships for Environmental Public Health (PEPH) network and Disaster Research Response (DR2) program**

PEPH Meeting: September 18 - 19  
DR2 Workshop: September 19 - 20  
Research Triangle Park, North Carolina  
[Website](#)

**1st Annual National Native Health Research Training Conference**  
September 18 - 20, 2017  
Denver, Colorado

consequences for metabolism, performance, behavior, and reproduction. She is also interested in whether cross-generational history of exposure reduces an organism's ability to respond to secondary stressors.

Kozal recently won an award for best student presentation at the 19th International Symposium on Pollutant Responses in Marine Organisms in Matsuyama, Japan.

When she is not in the lab, Kozal enjoys running, hiking, and traveling. She is the co-president of Building Outdoor Leaders at Duke (BOLD), an experiential outdoor leadership organization run by and for graduate and professional students

## HOT PUBLICATION

### Nanoparticle-based Membranes for Remediation

Membranes developed with a structured layer of iron and palladium nanoparticles have the potential for large-scale remediation applications, according to a [study](#) by University of Kentucky SRP Center researchers. They developed membranes containing these metal nanoparticles and measured the amount and size of nanoparticles within the membranes. They then measured the performance of the nanoparticle-based membranes and found that they degraded over 96 percent of a form of polychlorinated biphenyl (PCB), PCB 126. Repeated degradation experiments demonstrated successful PCB 126 dechlorination with nanoparticles regenerated for four cycles with only a small loss in reactivity.

The study quantified nanoparticle size as a function of membrane pore depth and PCB degradation reaction rate constants through both batch and convective flow. The consistency of the membrane permeability in a seven-day test as well as the pH reversibility behaviors demonstrated that these functionalized membranes were a stable platform for nanoparticles in-situ synthesis.

## AWARD WINNERS

### SRP Grantees Honored at University of Kentucky

University of Kentucky SRP Center grantees Tom Dziubla and Kelly Pennel received [teaching awards](#) during the University of Kentucky College of Engineering Awards Banquet. Pennell was given an award for Outstanding Teacher in Civil Engineering. Dziubla was recognized as the Tau Beta Pi Outstanding Teacher.

## CALL FOR ABSTRACTS

### Special Topics Conference on Healthcare Innovations and Point-of-Care Technologies

The Institute of Electrical and Electronics Engineers and the

## [Website](#)

### 21st North American ISSX

#### Meeting

September 24 - 28, 2017

Providence, Rhode Island

## [Website](#)

### SRP Risk-eLearning Webinar:

#### Introduction to AOPs

October 11, 2017, 1 – 3 pm ET

Webinar

Registration coming soon

### Southeast Asia Regional

#### Conference on Groundwater

#### Arsenic

November 2 - 3, 2017

Hanoi, Vietnam

## [Website](#)

### SETAC North America Annual

#### Meeting

November 12 - 16, 2017

Minneapolis, Minnesota

## [Website](#)

### SRP Annual Meeting

December 6 - 8, 2017

Philadelphia, Pennsylvania

## [Website](#)

### International Conference on One

#### Medicine One Science

April 29 - May 2, 2018

Minneapolis, Minnesota

## [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 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 [SRP Events page](#) contains

National Institutes of Health are hosting the [2017 Special Topics Conference on Healthcare Innovations and Point-of-Care Technologies](#) at the NIH Natcher Conference Center in Bethesda, Maryland, November 6-8. The conference will provide an international forum for clinicians, healthcare providers, industry experts, innovators, policy professionals, researchers, and students to define clinical needs and technology solutions towards commercialization and translation to clinical applications across different environments and infrastructures.

The submission deadline is **September 15, 2017**, for 4-page paper submissions, 4-page student competition papers, and 1-page technical papers. All researchers, clinicians, and students engaged in scientific and clinical research related to healthcare applications are invited to attend.

### **International Conference on One Medicine One Science**

The third [International Conference on One Medicine One Science](#) (iCOMOS) will be held in Minneapolis, Minnesota, April 29 - May 2, 2018. iCOMOS will explore new ways to solve pressing health issues, facilitate interdisciplinary collaborations, and promote science's role in influencing public policy at the interface of humans, animals, and the environment. The conference will feature NIEHS Director Linda Birnbaum, as well as presentations by SRP Health Scientist Administrator Heather Henry, grantee Jose Cordero, and former trainee Nishad Jayasundara.

[Poster abstracts](#) are being accepted and must be submitted no later than **January 15, 2018**. A limited number of travel awards will be available for selected abstracts with preference for students and trainees.

## FUNDING OPPORTUNITIES

### **BD2K RoAD Trip Fellowship Opportunity**

The Big Data to Knowledge (BD2K) Training Coordinating Center has developed the [Data Science Rotations for Advancing Discovery \(RoAD-Trip\) program](#) to specifically foster new collaborations among junior biomedical researchers and senior-level data scientists to address the challenge of translating complex data into new knowledge.

The RoAD-Trip program provides fellowship support to junior biomedical scientists with pre-existing data, wishing to integrate their prior training and experience together with expertise and Big Data/resources being housed at leading institutions around the United States. Through this program, junior investigators will make important connections with more senior scientists which can foster new biomedical discoveries, whereas the more senior data scientists gain access to novel data types ripe for computational modeling, analysis, and visualization.

The program is accepting applications through **September 16**.

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.

Junior biomedical fellows will receive \$4000 to assist with travel costs, per diem, etc. and senior data science mentors will receive a \$1000 stipend for their expertise and support.

### Toxics 2018 Travel Award

The [Toxics 2018 Travel Award](#), sponsored by the journal Toxics, will help towards travel costs for a postdoctoral fellow or non-fellow postdoctoral trainee in toxicology research to present his/her data, in poster or oral presentation format, at a scientific conference in 2018. The prize will consist of 800 Swiss francs. Applications are due **November 30, 2017**. The winners will be announced by the end of January 2018.

### NHGRI Genomic Data Science Analysis, Visualization, and Informatics Lab-space (AnVIL)

The [AnVIL Funding Opportunity Announcement](#) supports an interoperable resource for the research community by co-locating data, storage, and computing infrastructure with commonly used services and tools for analyzing and sharing data. The AnVIL will further advance research by leveraging a cloud-based infrastructure to facilitate genomic data access by the broad scientific community, integration and computing on and across large datasets generated by NHGRI programs, or programs funded by others in support of human genomics research. The AnVIL resource will provide genomic researchers with the following:

- Cloud-based infrastructure and software platform
- Shared analysis and computing environment
- Participation in a federated genomic data commons ecosystem
- Cloud services cost control
- Genomic datasets, phenotypes and metadata
- Data access and data security
- User training and outreach
- Incorporation of scientific and technology advances

Letters of intent are due **October 9, 2017**. Full applications are due **November 9, 2017**. Applicants are encouraged to apply early to allow adequate time to make any corrections to errors found in the application during the submission process by the due date.

### INTERAGENCY NEWS

#### Updates to EPA's EJSCREEN Provide Access to Important New Data

The U.S. Environmental Protection Agency (EPA) launched its annual update of their nationally acclaimed [Environmental Justice Screening and Mapping Tool \(EJSCREEN\)](#). The updated version incorporates the most up-to-date demographic and environmental data available. It also reflects improvements made based on feedback gleaned from users. In addition to updating the underlying datasets, the highlights of this year's updates include:

- A revised water data layer that vastly improves user ability to screen for surface water pollution
- The ability to look at municipalities as distinct geographic areas--a common request from local government users--in addition to states, counties and census boundaries
- New map layers that provide data on public institutions such as schools and public housing

EPA will host a [webinar](#) on **September 14** on how to use the newly updated tool.