



# Superfund Research Program *e-Posted Notes*

December 9, 2016 (Issue 155)

## HEADLINES

### **NIEHS EHS FEST and SRP Annual Meeting a Success**

Thank you to everyone involved in the NIEHS Environmental Health Science FEST (EHS FEST) and the SRP Annual Meeting for making it such a success! Held in Durham, North Carolina this week, EHS FEST brought together a diverse group of researchers, community engagement teams, trainees, and young investigators supported by NIEHS, which led to several days of excellent scientific dialogue and facilitated collaborations among grantees. Held in conjunction with EHS FEST, the SRP Annual Meeting on Monday, December 5 provided an opportunity for SRP grantees to catch up and highlighted the exceptional work of SRP trainees. Thank you to everyone who attended, presented, and helped organize sessions. We couldn't have done it without you!

### **Elizabeth Martin Receives 2016 Karen Wetterhahn Memorial Award**

Elizabeth Martin, a graduate student at the University of North Carolina at Chapel Hill (UNC) SRP Center, is the 19th recipient of the annual Karen Wetterhahn Memorial Award. The award, which recognizes outstanding SRP graduate students and postdoctoral researchers, was presented to Martin at the 2016 SRP Annual Meeting. Martin aims to address two critical knowledge gaps in public health: how the epigenome mediates the health effects of toxic metals, and how disease risk is influenced by differences in metal metabolism between individuals. So far her research as an SRP trainee has generated 12 publications, including one presenting support of her [original hypothesis](#) that describes how environmental contaminants cause specific DNA methylation patterns in certain genes. Visit the [SRP Wetterhahn page](#) to learn more about Martin and her work at UNC and for more information about the Karen Wetterhahn Award.

### **SRP SBIR/STTR Funding Opportunity Due January 5**

The NIEHS SRP Small Business Innovation Research & Small Business Technology Transfer Grants (SBIR/STTR, R41, R42, R43, R44) are awarded to foster the commercialization of technologies, products, and devices developed by SRP grantees and others. Please see the [Hazardous Substances Detection and](#)

## EMPLOYMENT OPPORTUNITIES

### **Environmental Engineer - Arizona State University**

The [Ira A. Fulton Schools of Engineering](#) at Arizona State University seeks applicants for tenure-track/tenured faculty positions in environmental engineering. A successful candidate will have leadership potential and expertise in environmental process engineering to complement the existing environmental engineering group, which aims to transform science, technology and education in environmental engineering.

The [School of Sustainable Engineering and the Built Environment](#), one of the six Fulton Schools, seeks to fill two positions. One position will have an emphasis on the food/water/energy nexus with a focus on sustainable food supply for the next century. The second position will have an emphasis on environmental geohydrology and treatment. The successful candidate will be expected to teach undergraduate and graduate courses in environmental engineering and science, develop an internationally recognized and externally funded research program, adopt innovative educational practices in graduate and undergraduate instruction, advise students and undertake service activities. Appointment will be at the

[Remediation Program page](#) for more information on the SRP SBIR/STTR grants. See the [SBIR/STTR webpage](#) for application information as well as other SBIR/STTR opportunities within NIEHS.

The next application receipt due date is **January 5, 2017**. If you are interested in applying, please contact Heather Henry at [henryh@niehs.nih.gov](mailto:henryh@niehs.nih.gov) or (919) 541-5330.

## KC Donnelly Award Supplements Due January 31

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). This 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 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.

## Data Sharing Ideas?

At the SRP Annual Meeting this week, we heard a lot about the importance of data sharing and the need for standards for managing and citing shared data. If you have thoughts towards facilitating data sharing within the SRP, please reach out to Michelle Heacock ([HeacockM@niehs.nih.gov](mailto:HeacockM@niehs.nih.gov)). We also encourage you to respond to the [NIH Request for Information: Strategies for NIH Data Management, Sharing, and Citation](#). More information on this RFI may be found below in the interagency news section.

## 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:

- [Toxicologists share novel insights on stem cells and epigenetics](#)
- [Researchers discover how carbon nanotubes can harm cells from the inside](#)

assistant, associate, or full professor rank, commensurate with the candidate's experience and accomplishments, beginning August 2017 or sooner.

Review of applications began **December 1**. If not filled, reviews will occur on the 1st and 15th of the month thereafter until the search is closed. For more information, visit the [ASU Faculty Hiring website](#).

### Associate Director, National Toxicology Program (NTP) and Scientific Director, Division of the National Toxicology Program (DNTP)

NIEHS is seeking a dynamic, highly motivated thought leader to serve as Associate Director, National Toxicology Program (NTP), and Scientific Director, Division of the NTP. The NTP (headquartered at NIEHS) is an interagency program of the NIH, U.S. Food & Drug Administration (FDA), and Center for Disease Control and Prevention (CDC), whose mission is to evaluate agents of public health concern by developing and applying tools of modern toxicology, molecular biology, and computational science. The ideal candidate will hold a doctoral degree (Ph.D., M.D., D.V.M., or equivalent) and will be an internationally recognized expert in environmental health sciences with a broad scientific knowledge of experimental toxicology, carcinogenesis, toxicological pathology, mechanistic toxicology, computational toxicology, epidemiology, regulatory science, public health translation, and/or other relevant discipline.

Applications for this position will be accepted until **January 31, 2017**. For more information, visit the [NIEHS jobs page](#).

### Associate/Full Professor, Quantitative Methods – Northeastern University

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

- [Grantees AxNano and NC A&T Host Kickoff Meeting with NIEHS](#)
- [Brown SRP Center Hosts Seminar to Bridge Gap Between Science, Arts, Humanities, and the Public](#)

## Some Fish Quickly Adapt to Lethal Levels of Pollution

Evolution is working under pressure to rescue some coastal fish from a lethal, human-altered environment. Now, a new study has revealed the complex genetic basis for the Atlantic killifish's remarkable resilience. The new findings, published today in the journal *Science*, build on decades of research into the killifish's ability to survive industrial contamination. Woods Hole Oceanographic Institute (WHOI) biologists Mark Hahn and Sibel Karchner collaborated on the new multi-institutional study, which was led by the University of California, Davis. Hahn and Karchner have been studying PCB-resistant killifish in New Bedford Harbor since 1995 as part of the Boston University SRP Center, in collaboration with WHOI colleagues and with researchers from the U.S. Environmental Protection Agency's Atlantic Ecology Division in Rhode Island. See the [WHOI News Release](#) and the [article in Science](#) to learn more.

## UC Berkeley and Columbia SRP Researchers Featured in Lancet Report

UC Berkeley SRP researcher Allan Smith and Columbia SRP researchers Joe Graziano and Alexander van Geen were among the experts featured in a recent Lancet Report on arsenic poisoning in Bangladesh. The story, "[In Bangladesh, arsenic poisoning is a neglected issue](#)", describes how millions of people in Bangladesh are still being exposed to arsenic in their drinking water, decades after the problem was identified. The article includes findings from Graziano's team that arsenic may be responsible for one in five deaths among people drinking the contaminated water and is associated with effects on children's cognitive development.

The article also emphasized that the capacity for successful intervention exists. The government installed thousands of tube wells over the years, but they were targeted at general water supply, not arsenic mitigation. Van Geen, found that if the wells were targeted in high arsenic areas, then the number of people helped would triple.

## Penn SRP Center Featured in Chemical and Engineering News

The University of Pennsylvania (Penn) SRP Center was recently highlighted in a Chemical and Engineering News cover story. The story focuses on the Penn SRP Center and how they are studying asbestos from all angles. The Penn SRP Center projects focus on remediation, transport, and exposure of asbestos, as well as

The Northeastern Department of Health Sciences invites applicants for a faculty member at the Associate/Full Professor rank with expertise in applying advanced quantitative research methods to any of the following areas: urban health, population health, global health, environmental health, health economics, or other health fields. This appointment is central to advancing the University's Academic Plan, [Northeastern 2025](#), and positioning the department as the hub of public health and population health initiatives at the University. The principal responsibilities of this position are to maintain an active, funded research program in health sciences, mentor students at all levels, teach in the department's undergraduate and/or graduate programs, and perform service for the department and university at an appropriate level for senior faculty. Engaging in intra-university research collaborations is strongly encouraged.

To apply, visit the [Bouvé College website](#) and click on 'Faculty Positions' to apply online. Applicants should submit a cover letter of interest, a curriculum vitae, and names and contact information for three references. For questions about the search, please contact Sharon Harlan, PhD, Search Committee Chair, at [s.harlan@northeastern.edu](mailto:s.harlan@northeastern.edu).

## Brown SRP Environmental Health State Agencies Liaison Postdoctoral Fellowship

The Brown Superfund Research Program (SRP) seeks applicants for an [Environmental Health State Agencies Liaison \(SAL\) postdoctoral fellow](#). The fellow will act as a liaison between parties interested in promoting public health by fostering a better understanding of environmental contamination and

prevention of asbestos-induced mesothelioma. The story describes their research projects as well as the community they are working with in Ambler, Pennsylvania. Visit the [Chemical and Engineering News page](#) to learn more about the innovative research at the Penn SRP Center.

## TRAINEE SPOTLIGHT

### 2016 SRP Annual Meeting Poster Winners

Congratulations to the six students who received awards in the annual poster competition at the 2016 SRP Annual Meeting.

**In the environmental sciences and engineering category, the winners were:**

- **1st place:** Ruben Spitz, Brown University
- **2nd place:** James P. Sanders, University of Maryland, Baltimore County
- **3rd place:** Elisabeth Feld-Cook, Louisiana State University

**In the health sciences category, the winners were:**

- **1st place:** Elana Elkin, University of Michigan
- **2nd place:** Stephanie Kim, Boston University
- **3rd place:** Hao Wang, University of Washington

Congratulations to the 2016 poster winners! And thanks to all trainees who presented during the poster session and who gave an oral presentation during the meeting. It was great to hear about all of the wonderful research in the program.

## HOT PUBLICATION

### Childhood Fish Consumption Linked to Higher ADHD

Studies in recent years have touted the importance of fish consumption for brain development, while also warning of the effects of the neurotoxin mercury in some fish varieties. Now, a study from the Boston University SRP Center led by Ann Aschengrau suggests that higher levels of fish consumption in childhood are associated with elevated odds of attention deficit hyperactivity disorder (ADHD), raising new questions about the benefits and risks associated with fish intake.

The [study](#), in the International Journal of Environmental Research and Public Health, was based on questionnaires completed by more than 1,100 Cape Cod adults who were asked about their fish consumption in childhood (ages 7 to 12) and learning and behavioral problems. Fish intake was not associated with low educational attainment or cognitive or behavioral problems, with the exception of ADHD, the study found. Participants who reported eating fish several times a week as children had 4.5 times the odds of ADHD as non-fish consumers. They also were more likely to report having difficulty paying attention or sitting still. The ADD/ADHD association was strongest for typical

how to respond to it. The position is designed to ensure that Rhode Island communities and government agencies are informed by and engaged with basic research on environmental pollution and health impacts. The initial appointment is for one year, ideally beginning in July 2017, and is renewable for up to three years. For full consideration, please apply by **January 8, 2017**. See the [job posting](#) for more information and to apply. Please contact Scott Fricke ([scott\\_fricke@brown.edu](mailto:scott_fricke@brown.edu)) or Christina Ergas ([christina\\_ergas@brown.edu](mailto:christina_ergas@brown.edu)) with any questions.

### 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).

consumers of high-mercury fish, but, unexpectedly, also observed for those who typically chose low-mercury fish or canned tuna. The research team said the association between childhood fish intake and ADHD should be further explored in a present-day population of children in order to ensure that reports of fish consumption are as accurate as possible.

## AWARD WINNERS

### Duke Trainee Claudia Gonzalez-Hunt Receives First Prize in Poster Competition

Claudia Gonzalez-Hunt, a trainee in Joel Meyer's lab at the Duke University SRP Center, received first prize in the poster competition at the Genetics and Environmental Mutagenesis Society (GEMS) of North Carolina meeting on November 9, 2016. Her research and poster topic focuses on the mechanism of rotenone mitotoxicity in *C. elegans* and the role of the glyoxylate pathway.

### Duke Trainee Casey Lindberg Receives Research Fellowship

Duke SRP Center trainee Casey Lindberg has received a research fellowship from the North Carolina Sea Grant and the Water Resources Research Institute to complete a one-year research project. Lindberg is one of only five students statewide selected to receive this highly competitive fellowship. She works in Dr. Richard Di Giulio's lab on his SRP project related to PAH exposures and development.

## WEBINARS

### Zika Virus Emerging Disease in Puerto Rico: What Public Health Officers Need to Know

The Northeastern PROTECT (Puerto Rico Testsite for Exploring Contamination Threats) SRP Center would like to invite you to attend their next webinar, Zika Virus Emerging Disease in Puerto Rico: What Public Health Officers Need to Know. The webinar, which will be held on Monday, December 12, 1:00 – 2:00pm EST, will be presented by Dr. Brenda Rivera, the State Epidemiologist for Puerto Rico in the Puerto Rico Department of Health. To learn more about Dr. Rivera, visit the [PROTECT webpage](#). If you are interested in attending, please contact Melanie Smith ([m.smith@neu.edu](mailto:m.smith@neu.edu); 617-373-2976) to RSVP and receive the WebEx invitation needed to attend.

### How to Apply for an EPA P3 Grant

The U.S. Environmental Protection Agency (EPA) Office of Research and Development, National Center for Environmental Research invites you to attend an informational webinar on EPA's 2017 – 2018 P3 Awards: A National Student Design Competition for Sustainability Focusing on People, Prosperity and the Planet (P3) request for applications (RFA). Learn about EPA's P3

### 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.

### 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

program, topics in this year's upcoming funding opportunity, and how to apply. EPA P3 program experts will be available to answer questions during a question & answer session following the presentation.

Through this EPA program, college students can benefit people, promote prosperity, and protect the planet by designing environmental solutions that move us towards a sustainable future. This year's P3 Phase I RFA is anticipated to open in December 2016. For more information, visit the [EPA P3 Program website](#).

## 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](#).

## CALL FOR ABSTRACTS

### 13th International Conference on Mercury as a Global Pollutant

The 13th edition of the International Conference on Mercury as a Global Pollutant (ICMGP) will be held in Providence, Rhode Island on **July 16 – 21, 2017**. The Executive Committee of the ICMGP 2017 encourages you to share your work, ideas, research, and challenges by submitting an abstract related to the [themes and topics](#) of the conference.

**Abstracts are due December 15, 2016.** Visit the [ICMGP Call for Abstracts page](#) for more details and to submit an abstract. As you proceed with the abstract submission process, please direct any questions to the Conference Secretariat at [Mercury2017@agendamanagers.com](mailto:Mercury2017@agendamanagers.com).

## 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

(bisulfite sequencing) and gene expression (RNAseq) datasets. For more information and to apply, visit the [Woods Hole Oceanographic Institution website](#).

## CURRENT RESEARCH BRIEF

Research Brief 264: "**The Porous Extraction Paddle: A Non-Targeted Sampling Device to Detect Contaminants in Urine**" (Roger Giese, Northeastern University) is available on the [SRP Research Briefs website](#).

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

**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](#)

**Highly Fluorinated Compounds – Social and Scientific Discovery**

**Co-hosted by the Northeastern SRP Center**

June 14-15, 2017

Boston, Massachusetts

Contact Stephanie Knutson

[\(s.knutson@northeastern.edu\)](mailto:(s.knutson@northeastern.edu)) for

more information.

**13th International Conference on Mercury as a Global Pollutant**

**Co-Host: Dartmouth SRP Center**

July 16-21, 2017

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](#).

### The William L. Wilson Scholarship in Karst Science

To stimulate the development of new, energetic, motivated, and creative karst scientists, and to remember Bill Wilson and his dedication to karst science, the William L. Wilson Scholarship in Karst Science scholarship has been established in his memory. The scholarship includes recognition at the Karst Waters Institute spring banquet, a plaque naming the awardee, and a one-time award of \$1,000. The applicant must be currently enrolled in, or have been accepted into, a master's degree program at an institution of higher education in the United States. Ph.D. students are not eligible.

Applications are due by **February 1, 2017**. For more information about the scholarship and to apply, visit the [Karst Waters Institute Scholarship page](#).

## INTERAGENCY NEWS

### NIH Request for Information (RFI): Strategies for NIH Data Management, Sharing, and Citation

NIH released a [Request for Information \(RFI\)](#) seeking public comments on data management and sharing strategies and priorities in order to consider: (1) how digital scientific data generated from NIH-funded research should be managed, and to the fullest extent possible, made publicly available; and, (2) how to set standards for citing shared data and software.

NIH has maintained the principle that "data sharing is essential for expedited translation of research results into knowledge, products, and procedures to improve human health." The agency has a long history and continued commitment to ensure that, to the fullest extent possible, the results of federally-funded scientific research are made available to and are useful for the general public, industry, and the scientific community. Feedback obtained through this RFI is intended to be used to inform the development of NIH policies pertaining to the management and sharing of digital scientific data generated from NIH-supported research, including how these data and software should be cited, and other

Providence, Rhode Island

[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 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.

applicable NIH activities. Responses to this RFI must be submitted by **December 29, 2016**. For more information, visit the [NIH RFI: Strategies for NIH Data Management, Sharing, and Citation](#).

## 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.