

Superfund Research Program *e-Posted Notes*

May 6, 2016 (Issue 148)

HEADLINES

EPA's Federal Technology Transfer Act (FTTA) Program: Opportunities for NIEHS grantees

On a webinar on **May 19 from 1 – 3 pm ET**, staff from the U.S. Environmental Protection Agency (EPA) Federal Technology Transfer Act (FTTA) Program will highlight opportunities for NIEHS university grantee researchers to partner with the EPA to evaluate and further develop some of their research products. They will provide an overview of the process to enter into this partnership through a Cooperative Research and Development Agreement (CRADA) as well as defining intellectual property (IP) and confidential business information (CBI) protection. Collaborative partnerships provide a win-win scenario with the ability to share expertise, leverage each other's resources, and further each partner's research efforts. This webinar session will cover the basic concepts of technology transfer collaborations and intellectual property, as well as introduce you to the EPA FTTA staff who will assist you in establishing a collaborative partnership with EPA researchers. To register, visit the [WebEx webinar page](#).

Risk e-Learning Webinar: SRP Water Innovation – An Integrated Approach to Sustainable Solutions

The NIEHS Superfund Research Program (SRP) and EPA's Contaminated Site Clean-Up Information (CLU-IN) held the first session in a series of free Risk e-Learning webinars, [SRP Water Innovation – An Integrated Approach to Sustainable Solutions](#): Session I - Introducing the Big Picture, on Monday, April 25. The session featured SRP Director **Bill Suk**, **David Sedlak** from the UC Berkeley SRP Center, and **Wendy Heiger-Bernays** and **Madeleine Scammell** from the Boston University SRP Center. The speakers introduced challenges and opportunities related to protecting water quality and promoting access to safe, drinkable water. The session also led to a great discussion about some of the issues with water reuse, providing clean drinking water, and unregulated contaminants. If you were not able to attend, an archive will be available soon on the [CLU-IN website](#).

Stay tuned for sessions highlighting water remediation, contaminant detection, health effects, and community

EMPLOYMENT OPPORTUNITIES

NHLBI Employment Opportunities

The NIH National Health, Lung, and Blood Institute has announced three open positions in the Division of Cardiovascular Sciences, Prevention, and Population Sciences Program (PPSP). They are hiring a genetic epidemiologist, HIV epidemiologist, and a program director to work at the cutting edge of data sharing. Applications are due May 9. For more information and to apply, visit the [USA Jobs website](#).

Duke SRP Positions

The Duke SRP Center is currently hiring for a project coordinator position and a summer internship. The Project Coordinator position focuses on bi-directional community engagement and the communication of science and policy related to hazardous chemicals. The Project Coordinator is based within the Duke SRP Center and works in close conjunction with researchers and other staff. For more information and to apply for the Project Coordinator position, visit the [Duke Jobs page](#) and search on the requisition number: 401086054.

This summer internship will support the development of the Duke Superfund Center's community garden engagement project through conducting literature reviews,

engagement. We are tentatively scheduling a session on detection technologies for June 27 and a session on remediation technologies for June 28. Look out for an announcement coming soon for the two upcoming sessions! Information will also be posted on the [SRP Water Innovation – An Integrated Approach to Sustainable Solutions webpage](#) when it becomes available.

SRP Opportunities for Trainees Page

We are excited to share with you some very informative websites that we received from our colleagues at the National Science Foundation regarding trainee opportunities. You will now find three NSF links added to the [Opportunities for Trainees page](#) under "Ongoing Opportunities." We encourage you to use this page as a resource for upcoming and ongoing opportunities for trainees.

We are also trying to arrange a future webinar with our NSF colleagues to give you an overview of the types of grants/awards that trainees and new investigators can apply for. Please stay tuned for that!

Responding to Emerging Health Threats through Research and Training

The [NIEHS Worker Training Program \(WTP\)](#) is holding a workshop and awardee meeting on **Wednesday, July 20 in Boston, Massachusetts**. This year marks the 50th anniversary of environmental health science research at the National Institutes of Health. This workshop will focus on NIEHS's role in the response to various environmental health events, and reflect on historical themes, with panels and timelines. SRP staff will be attending the meeting, along with the Disaster Research Response Exercise on July 19 and we encourage you to attend, especially if you are in the area! For more information and to register, visit the [NIEHS WTP Meeting website](#).

IN THE NEWS

NIEHS SRP News Stories

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

- [International environmental health conference crosses borders and disciplines](#)
- Paper of the month: [Effects of low arsenic levels during pregnancy and fetal growth](#)
- Paper of the month: [Anti-inflammatory chemical may offer new tool for depression treatment](#)

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

- [Northeastern SRP Center Releases New Reproductive Health Bulletin for Health Care Professionals](#)
- [Special Issue Highlights Invited Reviews from the Pacific](#)

helping to define the geographic extent of these issues in NC, and creating a resource inventory for community gardeners and other stakeholders. If you are interested in the summer internship position, contact: [Elizabeth Shapiro-Garza](#) or [Bryan Luukinen](#).

BU SRP Administrative and Program Assistant

The Boston University (BU) SRP Center is hiring an Administrative and Program Assistant. The primary purpose of the position is to ensure coordination of activities among the research projects and the support cores of the BU SRP. This individual will work closely with members of the executive committee of the BU SRP to carry out the day-to-day administrative and programmatic activities. The position requires a bachelor's degree and 1-3 years of experience. For more information, visit the [BU Human Resources page](#).

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

Mary Lou Guerinot Elected to the National Academy of Sciences

Congratulations to Dartmouth SRP Center researcher Mary Lou Guerinot on her election to the National Academy of Sciences, one of the highest honors for distinguished and ongoing achievements in original research! Guerinot studies the molecular mechanisms of metal ion uptake and its regulation in prokaryotic and eukaryotic cells using a combined genetic, molecular, and biochemical approach. Her Dartmouth SRP Center project focuses on arsenic uptake, transport, and storage in plants.

FDA Report on Arsenic in Rice and Rice Products Cites SRP Researchers

The U.S. Food and Drug Administration is taking steps to reduce inorganic arsenic in infant rice cereal, a leading source of arsenic exposure in infants. Relative to body weight, rice intake for infants, primarily through infant rice cereal, is about three times greater than for adults. Through a draft guidance to industry, the FDA is proposing a limit or "action level" of 100 parts per billion (ppb) for inorganic arsenic in infant rice cereal. This is parallel to the level set by the European Commission (EC) for rice intended for the production of food for infants and young children.

The FDA Report on Arsenic in Rice and Rice Products released in March for public comment cited publications by SRP researchers at Columbia University, University of North Carolina (UNC), University of California Berkeley, Dartmouth College, and University of Arizona. The SRP studies focus on both exposure to arsenic and health effects of exposure. See the [FDA report](#) and [press release](#) for more information.

Study from OSU SRP Researchers Finds Tar Sealants used to Coat Driveways are Toxic

Researchers led by Oregon State University (OSU) SRP Center scientist Staci Simonich found that pavement sealcoat products used widely around the nation on thousands of asphalt driveways and parking lots are significantly more toxic and mutagenic than previously suspected. The primary concern in sealcoats are polycyclic aromatic hydrocarbons, or PAHs, the focus of much of the OSU SRP Center. Studies done with zebrafish -- an animal model that closely resembles human reaction to toxic chemicals - showed developmental toxicity to embryos. See the [study](#) published in Environmental Science and Technology Letters to read more. The findings were also highlighted in [Science Daily](#).

Sedlak Featured in the Atlantic

UC Berkeley SRP Center researcher Davis Sedlak was featured in an article in The Atlantic discussing the need for more clean water in California. In the article, Sedlak discusses his book,

Health Science and Social Science" (EH+SS), co-directed by Silent Spring Institute 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.

Several positions in Environmental Toxicology - University of California at Riverside

The University of California,

[Water 4.0](#), where he suggests that some areas should abandon centralized water systems all together. With the help of a technology called a membrane bioreactor, homes and apartment buildings could someday have wastewater-treatment plants in their basements. Perhaps people can conserve enough water that they can survive on just stormwater and recycled water from local sources alone. See the [article](#) in The Atlantic to read more.

BU SRP Holds Forum on Contaminants in Fish

As part of the Museum of Science, Boston and Boston University (BU) SRP Research Translation Core's partnership, the team held a public forum entitled *What's in Your Fish?* on the evening of March 31st. The event was designed to engage citizens, policymakers, and scientists in deliberative conversations around emerging scientific and technological issues regarding hazardous waste sites as well as contaminants in seafood. The evening's programming consisted of three talks by SRP grantees and three case study discussions. See the [BU SRP website](#) to read more.

TRAINEE SPOTLIGHT

Kelly Ferguson

Kelly Ferguson recently wrapped up her time as a trainee with the Northeastern SRP [PROTECT](#) Center to begin a new position as the latest tenure-track researcher in the NIEHS Epidemiology Branch. Ferguson is now the head of the [Perinatal and Early Life Epidemiology Group](#), and studies how a mother's exposure to chemicals impacts her pregnancy and the development of her child.



Before joining NIEHS this year, Ferguson was a doctoral student and then a postdoctoral researcher under the guidance of John Meeker at the University of Michigan. Meeker leads a molecular epidemiology study as part of the PROTECT Center on phthalate exposure and preterm birth in Puerto Rico. As part of the project, Ferguson found associations between maternal biomarkers of phthalate exposure and [oxidative stress](#) and [inflammation](#) in pregnant women. In another [study](#), she also found that maternal oxidative stress may be an important contributor to preterm birth.

At NIEHS, Ferguson continues to study how chemical exposure can affect pregnancy outcomes. Some of her current work includes how a mother's exposure to chemicals found in plastics and personal care products, such as perfumes, deodorants, and

Riverside is embarking on a major new hiring initiative that will add 300 tenure-track positions in 33 cross-disciplinary areas selected through a peer-reviewed competition. They are currently looking to fill four positions in the area of environmental toxicology at both the junior and senior levels. The recruitment period is open and applications are due by **May 31**. For more information, see the [UC Riverside recruitment page](#).

CURRENT RESEARCH BRIEF

Research Brief 257: [Using Field Data and Numerical Modeling to Assess Vapor Intrusion Risk](#) (Kelly Pennell, University of Kentucky SRP) is available online.

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.

If you have ideas for future Research Briefs, please submit them to: HeacockM@niehs.nih.gov.

SRP-SUPPORTED EVENTS

EPA New England Update: Innovation and Collaboration on Hazardous Waste Clean-Up Grantee Event: Sponsored by the Northeastern University SRP
May 9, 2016, 1:00 - 2:00 p.m. EDT
Webinar
[Website](#)

NIEHS and the Society of Toxicology - Past, Present, and Future: 50 Years of Collaboration
July 13, 2016, 1:00 - 4:00 p.m. ET
Research Triangle Park, North Carolina
[Website](#)

NIEHS 2016 WTP Spring Workshop and Awardee Meeting

shampoos, affects her pregnancy. Effects include an increased number of pregnancy complications, and changes in delivery date and fetal development, among others (See a recent [NIEHS Environmental story](#) for more).

During her time as an SRP trainee, she went beyond her research by bringing her work to stakeholders and learning about environmental decision making. For example, she participated in the Reach the Decision Makers Fellowship last year as part of the University of California, San Francisco Program on Reproductive Health and the Environment. As the culmination of this fellowship, Ferguson traveled to Washington, D.C., to meet with key policy makers at the EPA. Following the release of the proposed National Ambient Air Quality Standards rule on ozone, Ferguson and her group submitted comments advocating for the inclusion of pregnant women and communities with multiple risk factors as vulnerable populations (See a past [SRP news story](#) to read more).

When she is not in the lab, Ferguson enjoys doing anything outdoors, including swimming, hiking, camping, running, and cross-country skiing. She also plays the violin and the piano and is learning the guitar.

HOT PUBLICATION

Effects of Low Arsenic Levels During Pregnancy and Fetal Growth

Consuming water and food with low levels of arsenic while pregnant may affect fetal growth, according to a new [study](#) led by Dartmouth SRP Center project leader Margaret Karagas. The study is one of the first to report an association between low-level exposure to arsenic during pregnancy and birth outcomes. Unlike the majority of epidemiological studies on arsenic exposure, this population-based, prospective study explored exposures at levels common in the U.S. Researchers analyzed 706 mother-infant pairs exposed through drinking water and diet. They measured urinary arsenic from each mother and compared it to the birth weight of her baby, adjusting for maternal prepregnancy weight.

Researchers found that decreased head circumference at birth was associated with higher levels of arsenic in the mother's urine during her second trimester. They also found associations with changes to birth weight and length, with mixed effects based on the sex of the newborn and maternal weight status. For example, the association between higher arsenic exposure and shorter birth length was only observed in males. They also observed that arsenic exposure was related to lower birthweight in female babies born to overweight or obese mothers, but the association was not significant for males or females of healthy weight mothers.

AWARD WINNERS

July 20, 2016
Boston, Massachusetts
[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](#)

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

November 6-10, 2016
Orlando, Florida
[Website](#)

NIEHS Environmental Health Science FEST

December 5-8, 2016
Durham, North Carolina
[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 information, SRP best practices,

Neumann Receives UW Innovation Award

University of Washington (UW) SRP Center researcher Rebecca Neumann was one of nine UW faculty to receive a 2016 UW Innovation Award. Her project will focus on the impact of climate change on food quality, particularly micronutrients and toxicants in rice. The concentration of zinc and arsenic in rice grain depends on plant access to and uptake of zinc and arsenic from soil, and on the translocation of these elements from plant roots into the grain. Her project will test whether and how elevated CO₂ and elevated soil temperature affect availability, uptake and translocation of arsenic and zinc in rice. See the [UW Innovation Awards page](#) to learn more.

Martyn Smith Appointed to Endowed Chair

UC Berkeley SRP Center Director Martyn Smith has been appointed to the Kenneth and Marjorie Kaiser Endowed Chair in Cancer Epidemiology within the UC Berkeley School of Public Health. The donors, Kenneth and Marjorie Kaiser, were interested in public health, with a particular focus on population studies of cancer. Smith has expertise and a broad background in molecular epidemiology, toxicology and genomics, aimed at finding the causes of chronic disease including lymphoma and leukemia. Smith has led the SRP Center at Berkeley since its inception in 1987.

Leveraging SRP Resources to Understand Community Wastewater Issues

A team of researchers including Damian Shea, a UNC SRP Center project leader and professor at NC State University, have been awarded a grant from the U.S. Department of Agriculture (USDA) National Institute of Food and Agriculture through the Agriculture and Food Research Initiative (AFRI) Water for Agriculture Challenge Area.

Shea and colleagues will deploy a non-selective passive sampling device developed through their UNC SRP project and use non-targeted and targeted screening methods used in the SRP to characterize chemical contaminants of concern and their human health risks for land-applied, secondary municipal wastewater onto forested lands. Visit the [USDA website](#) for more information about the award.

Lomnicki Receives LSU Alumni Association Rising Faculty Research Award

Louisiana State University (LSU) SRP Center researcher Slawo Lomnicki was recently awarded the LSU Alumni Association Rising Faculty Research Award. The award recognizes faculty at the rank of assistant professor who have outstanding records of scholarship and published research. Lomnick's LSU SRP Center [project](#) focuses on the formation and reactions of environmentally persistent free radicals in thermal processing of Superfund

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](#).

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WEBINARS

EPA New England Update: Innovation and Collaboration on Hazardous Waste Clean-Up

On **May 9 from 1 – 2 pm ET**, the Northeastern SRP Center will host the fourth installment in their webinar series, Collaboration for Innovation. This webinar will feature Curt Spalding, EPA Region 1 Administrator, who will present “EPA New England Update: Innovation and Collaboration on Hazardous Waste Clean-up.” Visit the [Northeastern SRP Center website](#) for more information.

CALL FOR ABSTRACTS

Passive Sampling in the Aquatic Environment Session at SETAC

A session entitled *Passive Sampling in the Aquatic Environment: Recent Development and Advances* has been conditionally accepted to the program for the Society of Environmental Toxicology and Chemistry (SETAC) North America 37th Annual Meeting November 5-10, 2016 in Orlando, FL. In this session, recent developments and advances involving passive sampling in aquatic environments including water, sediments and organisms will be highlighted.

If you have research interests related to this topic, we encourage you to submit an abstract for a presentation to this session. Abstract submissions for the platform and poster sessions are now open and close **June 8, 2016**. For more information, visit the [SETAC meeting website](#).

FUNDING OPPORTUNITIES

Research to Action Program Funding Opportunity Announcement

Research to Action (R2A) is a program whose purpose is to bring together community members and environmental and occupational health researchers to investigate the potential health risks of environmental and occupational exposures that are of concern to the community. Data collection, translation of research into public health action, and project evaluation are all required. Learn more by visiting the [Research to Action Web page](#) and reading about current and past projects.

A new Research to Action funding opportunity opened on **May 5 with the first due date on June 5**. This opportunity encourages applications using community-engaged research methods to investigate the potential health risks of environmental exposures of concern to the community and to implement an environmental public health action plan based on research findings. The overall

goal is to support changes to prevent or reduce harmful environmental exposures and improve the health of a community. See the [Funding Opportunity Announcement](#) for more information.

ATSDR Community Health Projects Related to Contamination at Brownfield/Land Reuse Sites

ATSDR's mission is to serve the public through responsive public health actions to promote healthy and safe environments and prevent harmful exposures to environmental contaminants. Sites such as Brownfield/Land Reuse sites may be the source of potentially harmful exposures because of contamination from previous property uses. Addressing public health concerns and issues related to the restoration of contaminated properties is essential. ATSDR is funding these community health projects to ensure that public health is an integral part of the land reuse process.

These projects will increase capacity to identify, address, and improve public health in redeveloping Brownfield/Land Reuse sites, ensuring that particular attention is paid to identifying and addressing health issues prior to redevelopment and assessing changes in community health associated with reuse plans and redevelopment. These community health projects that address impacts of contamination at Brownfield/Land Reuse sites will further ATSDR's public health mission to promote healthy and safe environments and prevent harmful exposures. Letters of intent are due on **June 3** and applications are due **July 5**. For more information, see the [ATSDR Funding Opportunity Announcement](#).

Lowe's Community Grant Opportunity

Do you work with community groups through your SRP Center? If so, your community partners may be interested in the Lowe's Community Partners grant program, which helps build better communities by providing monetary assistance to nonprofit organizations and municipalities looking for support of high-need projects such as: building renovations/upgrades, grounds improvements, technology upgrades, as well as safety improvements. Community Partners grants in the spring cycle are due **May 23**. For more information, visit the [Lowe's grant programs website](#).

INTERAGENCY NEWS

Setting the Stage for Leveraging Resources for Brownfields Revitalization

EPA developed a new guide, [Setting the Stage for Leveraging Resources for Brownfields Revitalization](#), to assist communities in overcoming the challenges of making sound investment decisions to attract additional resources for community revitalization. Many communities struggle to find and attract sufficient funding for brownfields redevelopment projects. It can

be difficult for communities to identify how best to invest limited local resources. Sound initial investments of local funds can open opportunities for additional public funds and attract the interest and support of outside investors and lead to additional funding.

