

Superfund Research Program *e-Posted Notes*

December 4, 2015 (Issue 143)

HEADLINES

SRP Annual Meeting a Success

Thanks to the PROTECT SRP Center and everyone involved in the SRP Annual Meeting this year for making it such a successful meeting! Held in San Juan, Puerto Rico, the SRP Annual Meeting brought together researchers, trainees, administrators, and partners to share research findings and discuss research translation, community engagement, and training. With a theme of SRP collaboration for innovation, participants were encouraged to find ways to work across disciplines and with different SRP grantees and partners from the U.S. Environmental Protection Agency (EPA) and the Agency for Toxic Substances and Disease Registry (ATSDR). Read about the meeting in the [NIEHS Environmental Factor](#) and check out a few photos from the meeting in the slideshow at the bottom of the article.

Nishad Jayasundara Receives 2015 Karen Wetterhahn Memorial Award

Nishad Jayasundara from the Duke University SRP Center is the 18th recipient of the annual Karen Wetterhahn Memorial Award. The award, which recognizes outstanding SRP graduates and postdoctoral researchers, was presented to Jayasundara at the 2015 SRP Annual Meeting. Jayasundara's research centers on understanding how rapid and profound changes in the environment affect the health of ecosystems and, in turn, the health and wellbeing of humans. For more about the Karen Wetterhahn Award, visit the [SRP website](#). A profile about Jayasundara will be posted next week on the Karen Wetterhahn Memorial page.

KC Donnelly Administrative Supplements Due January 31

The 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) which 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

EMPLOYMENT OPPORTUNITIES

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, 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

translational/transdisciplinary opportunities and experiences that improves their skill set and broadens their scientific network within other SRP-funded centers, government laboratories (EPA, ATSDR, NIEHS), or other agencies (state, local, Tribal).

The SRP KC Donnelly Administrative Supplement applications are due January 31, 2015. Please see the KC Donnelly [webpage](#) and [guidelines](#) for more information.

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 the SRP and others.

Please see the [Hazardous Substances Detection and 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. If you are interested in applying, please contact Heather Henry at henryh@niehs.nih.gov or (919) 541-5330.

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:

- [Summit addresses safe drinking water from private wells](#)
- [Innovative research and collaboration at SRP Annual Meeting](#)
- [Duke symposium addresses toxicity of energy production](#)

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

- [NIEHS SRP Staff Member Attends EPA's International Environmental Youth Symposium](#)
- [SRP Grantee Moderates Smartphone Apps for Citizen Scientists Workshop](#)

SRP Grantees Meet with EPA Region 1

SRP grantees in EPA Region 1 (Northeastern University, Boston University, Brown University, and Dartmouth College) visited the regional office in Boston and presented their accomplishments and research goals. The meeting included welcoming remarks from Deb Szaro (Deputy Regional Administrator for Region 1), an overview of the SRP from Health Science Administrator Heather Henry, and a panel discussion on the Callahan Mine Superfund Site. This event underscored the need for collaboration between university SRPs and governmental agencies in research and

are currently looking to fill four positions in the area of environmental toxicology at both the junior and senior levels. For more information and to submit an application, see the [UC Riverside recruitment page](#).

Research Scientists - Silent Spring Institute

The Silent Spring Institute is looking for research scientists in data science and informatics, chemistry/biochemistry and biomonitoring, and molecular biology or endocrinology. They have three postings at this time for a data scientist, machine learning expert, or statistician; a chemist, chemical engineer, or biochemist; and an individual with expertise in molecular biology and endocrinology. For more information, visit the [Silent Spring Institute website](#).

Biostatistician - Gradient

Gradient is an environmental and risk sciences consulting firm renowned for their specialties in Toxicology, Epidemiology, Risk Assessment, Product Safety, Contaminant Fate and Transport, and Environmental/Forensic Chemistry. Gradient is seeking a biostatistician who can apply relevant skills in biostatistics, statistics, and mathematics to toxicology- and epidemiology-related projects. Excellent analytic and critical thinking, writing, and communication skills are required. Must have the ability to organize and work with large datasets, and should be able to express complex statistical concepts and technical information to researchers and non-scientific audiences. Master's/PhD degree in biostatistics, statistics, mathematics or a related field of study with at least one year of coursework in statistics or biostatistics required. For more

remediation efforts taking place at Superfund sites.

Dartmouth-Sponsored Food Collaborative Convenes in Hanover

The Collaborative on Food with Arsenic and associated Risk and Regulation (C-FARR), sponsored by the Dartmouth College Toxic Metals SRP Center and the Children's Environmental Health and Disease Prevention Research Center at Dartmouth, met November 2 to discuss important issues surrounding arsenic in food. Guided by a steering committee and support staff, C-FARR convened a team of arsenic scientists and stakeholders from around the country to work together to address issues related to sources of arsenic and human exposure via food consumption. Over the next two years, the C-FARR team will gather and analyze data and publish a series of papers. Salient findings from this initiative will also be translated and distributed to public health and policy stakeholders.

Commercializing Passive Sampling Technology to Enhance the Risk Analysis Process

Damian Shea and his team at North Carolina State University have developed a new passive sampling technology that provides more accurate estimates of chronic exposure to hundreds of bioavailable chemicals in water, as part of the University of North Carolina SRP Center. As a result of the successful technology, Shea has created a new start-up company, Statera LLC, to manufacture, market, and distribute this new technology to users in the United States and across the globe. The technology, called a non-selective passive sampling device (ns-PSD), enables risk assessors involved with hazardous waste sites to gain critical information related to bioavailability, or the ability of a chemical to be taken up into animals and the human body, as well as time-weighted averages of contaminant concentrations in surface waters. To read more, visit the [UNC SRP Center website](#).

SRP Grantees Develop Nanotechnology Health and Safety Modules

With funding from an SRP Occupational and Safety Training Education Programs on Emerging Technologies (R25) grant, the Midwest Emerging Technologies Public Health and Safety Training Program develops and disseminates web-based modules to educate and train a variety of learners about health and safety issues associated with emerging technologies. This multi-institutional collaboration among the University of Minnesota School of Public Health, the University of Iowa College of Public Health, and Dakota County Technical College is developing 20 modules related to nanotechnology health and safety.

Six modules developed by the program, each with a one-hour presentation video and a hands-on activity, are now available on [Nano-Link](#) (free registration required). The first five modules

information, see the [Gradient jobs page](#).

Postdoctoral Fellowship Positions - Rice University

Rice University is pleased to announce and invite applications for the Rice Academy Postdoctoral Fellows Program. The 2016 competition focuses exclusively on topics broadly related to health. Applications are particularly welcome from those who are interested in interdisciplinary approaches to scholarship. Applicants must have earned the doctoral degree between September 1, 2012, and August 31, 2016. All applications should be submitted electronically at the [Rice University Academy of Fellows website](#) by **January 11, 2016**. Rice Postdoctoral Fellows are all expected to begin September 1, 2016.

Postdoctoral Fellowship Positions - UC Berkeley

The Center for Environmental Research and Children's Health (CERCH) at UC Berkeley is offering a 2-year post-doctoral fellowship in Maternal and Child Health Epidemiology with a focus on exposure to environmental hazards during pregnancy and childhood. [CERCH](#) is a research center working through community-based partnerships to investigate environmental exposures to future parents and children; evaluate their effects on child health, behavior, and development; and translate research findings into sustainable strategies to reduce environment-related childhood disease. To apply, send your CV, a cover letter describing your interests, and three names of reference to: Brenda Eskenazi, PhD, eskenazi@berkeley.edu; put "MCH epi postdoc" in subject line. Applications are being accepted

introduce learners with no prior background in occupational health and safety to the most important aspects of occupational hygiene. The sixth module provides an introduction to nanotechnology. Upcoming modules will focus on the anticipation, recognition, evaluation, and control of hazards presented by working with nanomaterials.

EPA Proposes Rule to Ban Agricultural Use of Chlorpyrifos, Cites Duke SRP Center

Based on potential aggregate exposure to chlorpyrifos in drinking water from certain watersheds, EPA has issued a proposal to revoke all food residue tolerances of chlorpyrifos. Essentially, this proposal would prohibit chlorpyrifos from being used for agriculture. The proposal cites seven studies from Duke SRP Center investigators Theodore Slotkin, Ed Levin, and their laboratories regarding neurodevelopmental outcomes following early life exposure to low doses of chlorpyrifos. EPA is now soliciting comment on the proposal. See the [EPA website](#) and the [Federal Register Proposed Rule](#) for more information.

BU SRP Receives Supplement to Develop Genomic Analysis Platform

Boston University (BU) SRP has received an administrative supplement to develop, apply, and deploy an economically feasible genomic analysis platform to predict the carcinogenicity, toxicity, and signaling mechanisms of environmental chemicals. The supplement is a collaboration between BU SRP Bioinformatics Core Co-Leader Stefano Monti and BU SRP Director David Sherr, Scott Auerbach at the NTP/NIEHS, and the Connectivity Map (CMAP) team, led by Aravind Subramanian at the Broad Institute. Through the inclusion of Superfund chemicals in the panel to be profiled, the supplement work will enable BU SRP project researchers to gain insight into the molecular mechanisms of action of the chemicals being investigated in their projects. See the [BU SRP website](#) for more information.

TRAINEE SPOTLIGHT

2015 SRP Annual Meeting Poster Winners

Congratulations to the four students who received awards in the annual poster competition at the 2015 SRP meeting.

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

- **Andrew Cooper, University of California, San Diego:** "Identification of new components in cadmium specific signaling networks"
- **Jing Sun, Columbia University:** "Use of reactive transport modeling for understanding and designing the magnetite based arsenic immobilization strategy"

until the position is filled.

CURRENT RESEARCH BRIEF

Research Brief 252: [Bioavailability Changes in Sediments and Bioaccumulation in Fish](#) (Upal Ghosh, University of Maryland, Baltimore County) 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

The International Chemical Congress of Pacific Basin Societies

December 15 - 20, 2015

Honolulu, Hawaii

[Website](#)

Karst, Groundwater Contamination, and Public Health: Moving Beyond Case Studies

Grantee Event: Co-Hosted by the

Northeastern University SRP

January 27 - 30, 2016

San Juan, Puerto Rico

[Website](#)

Central and Eastern European Conference on Health and the Environment (CEECH)

Grantee Event: Co-Hosted by the

University of Kentucky SRP

April 10 - 14, 2016

Prague, Czech Republic

[Website](#)

NIEHS Environmental Health Science FEST

December 5 - 8, 2016

Durham, North Carolina

[RSVP](#)

In the health sciences category, the winners were:

- **Oluwadamilare Adebambo, North Carolina State University (University of North Carolina at Chapel Hill SRP Center):** "Synergistic Induction of Metal-Responsive and Oxidative Stress Gene Biomarkers in Placental JEG-3 Cells by Arsenic & Cadmium Mixtures from Hazardous Waste Sites"
- **William Klaren, University of Iowa:** "Progression of micronutrient alteration and hepatotoxicity following acute PCB126 exposure"

Congratulations to the 2015 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

Risk of death from cardiovascular disease associated with low-level arsenic exposure among long-term smokers

A [study](#) from Dartmouth College, funded in part by the Dartmouth SRP Center, reports that arsenic exposure may increase ischemic heart disease mortality among smokers in the U.S. Led by Margaret Karagas, researchers conducted a prospective analysis of the association between toenail arsenic and cardiovascular disease mortality using longitudinal data collected on 3,939 participants in the New Hampshire Skin Cancer Study. In this U.S. population, arsenic exposure measured from toenail clipping samples was related to an increased risk of ischemic heart disease mortality among long-term smokers, although they observed no overall association. These results are consistent with evidence from more highly exposed populations suggesting a synergistic relationship between arsenic exposure and smoking on health outcomes.

AWARD WINNERS

Anna Chlebowski receives prestigious NRSA award

Oregon State SRP Center trainee Anna Chlebowski was recently awarded a Ruth L. Kirschstein National Research Service Award for Individual Predoctoral Fellowships, which will provide her with three years of support for research training leading to a Ph.D. This pre-doctoral training grant was awarded for her project, "Toxicology and Environmental Occurrence of Novel Nitrated PAHs." Anna works with investigators Staci Simonich and Robert Tanguay. For more on the research project, see the [NIEHS grant page](#).

Giese Receives Grant to Improve Testing for Carcinogens in Food

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, 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](#).

As a spin-off of technology developed in the Northeastern SRP PROTECT program, grantee Roger Giese has received funding from the Exploratory Grant Program of the National Institute of Food and Agriculture (NIFA), which is part of the U.S. Department of Agriculture. The idea of the project is to expand and replace many tests for carcinogens in foods with a single test. Giese will take advantage of novel mass tag technology developed in his laboratory that boosts sensitivity and specificity for analysis of environmental damage to DNA. In the PROTECT project, such technology is being applied to analyze placenta tissue from women in Puerto Rico. To read more, visit the [Northeastern SRP website](#).

Dartmouth SRP Grantees Selected as 2015 BioArt Winners

Mary Lou Guerinot and Tracy Punshon are part of a winning team for the 4th annual BioArt competition run by the Federation of American Societies for Experimental Biology (FASEB). Their entry will be displayed in the National Institutes of Health Visitor Center next year. Visit the [FASEB website](#) to see Guerinot and Punshon's winning photo and the other winners.

WEBINARS

SERDP and ESTCP Webinar Series

The Department of Defense's (DoD) environmental research programs - Strategic Environmental Research and Development Program (SERDP) and the Environmental Security Technology Certification Program (ESTCP) - are offering webinars to promote the transfer of innovative, cost-effective, and sustainable solutions. The webinar series targets end users including practitioners, the regulatory community, and researchers to provide cutting-edge and practical information from sponsored research and technology demonstrations.

Upcoming free webinars will highlight DoD research efforts in the environmental restoration and the resource conservation and climate change program areas. On **December 13**, David Goodrich (U.S. Department of Agriculture, Agricultural Research Service) and Heidi Howard (U.S. Army Engineer Research and Development Center, Construction Engineering Research Laboratory) will discuss watershed assessment and stormwater management optimization tools. To register, please visit the [SERDP & ESTCP Webinar Series page](#).

PEPH Webinar: Meet the Editors

Thinking of publishing an article about environmental public health? Interested in what journal editors are looking for these days? In this webinar, you will hear from three editors who will present some general ideas about what it takes to get an article published, styles and formats appropriate for environmental public health, and the possibility of special issues and supplements. This webinar will also include a Q&A session. The

webinar will take place on **December 14, 2015, 1:00 to 2:30 pm ET**. Visit the [NIEHS WebEx page](#) to register for the webinar.

FUNDING OPPORTUNITIES

NSF Funds Big Data Hubs, Releases Big Data Spokes Initiative

On November 2, the National Science Foundation (NSF) announced four awards, totaling more than \$5 million, to establish four Big Data Regional Innovation Hubs (BD Hubs) across the nation. NSF also released a new solicitation - [the BD Spokes initiative](#) - for projects that will leverage the BD Hubs' data. Each BD Spoke will focus on a specific BD Hub priority area and address one or more of three key issues: improving access to data, automating the data lifecycle, and applying data science techniques to solve domain science problems or demonstrate societal impact. See the [NSF Press Release](#) for more information. A letter of intent is due **January 12, 2016**, and proposals are due **February 25, 2016**.

Call For Proposals: Systems for Action - Systems and Services Research to Build a Culture of Health

Systems for Action (S4A) is a national program of the Robert Wood Johnson Foundation (RWJF) that studies novel ways of aligning the delivery and financing systems that support a [Culture of Health](#). Building on a foundation of scientific progress from both health services research and public health services and systems research, S4A uses rigorous methods to test strategies for improving the reach, quality, efficiency, and equity of services and supports that promote health and well-being on a population-wide basis. Studies funded through this call for proposals (CFP) will identify system innovations and interactions that drive collaboration and integration across the multiple financing and delivery systems that support a Culture of Health. Applicants must first submit a three-page letter of intent through RWJF's online system by **January 12, 2016**. Only those projects that align with the CFP will be invited to submit a full proposal, which will be due **March 11, 2016**. For more information, visit the [RWJF website](#).

The Open Science Prize - Enabling Discoveries for Health Big Data Open Science Prize Opportunity

The NIH Big Data to Knowledge initiative has partnered with Wellcome Trust, with additional support from the Howard Hughes Medical Institute, to launch a global science competition for new products or services to advance "open science," a movement to make scientific research data broadly accessible to the public. The Open Science Prize challenge consists of a two-phase competition. The first phase of the competition is accepting applications through **February 29, 2016**.

More information about the Open Science Prize including

eligibility and examples of potential innovations can be found on the [Open Science Prize website](#). Eligible teams must be a collaboration of a U.S. and an international partner.

The funders are holding a webinar on December 10, 2015, 11:00 am ET, to further discuss the prize and answer your questions. Visit the [Open Science Prize Event WebEx page](#) to register.

Multiproject Center Grants Request for Applications

The NIEHS is announcing the continuation of the Superfund Hazardous Substance Research and Training Program (P42) Request for Applications (RFA) to address the broad, complex health and environmental issues that arise from the multimedia nature of hazardous waste sites. SRP Center grants support problem-based, solution-oriented research Centers that consist of multiple, integrated projects representing both the biomedical and environmental science disciplines. The Center cores are also tasked with administrative, community engagement, research translation, research support, and training functions. Letters of Intent are due on **March 11, 2016**. Applications are due on **April 11, 2015**. For more information, see the [SRP Funding Opportunities - Multiproject Center Grants page](#).

If you missed the informational webinar to answer questions about [RFA-ES-15-019](#) on December 1, 2015, the archive is now available on the U.S. Environmental Protection Agency (EPA) [CLU-IN Training & Events Web page](#) for materials from the webinar and an archive.

INTERAGENCY NEWS

EPA Updates Data for Children's Environmental Health Indicators

EPA's website for America's Children and the Environment (ACE) is now updated with new data for several children's environmental health indicators. The ACE report brings together information from a variety of sources to provide national indicators, which are easy-to-understand summaries of data from national surveys and studies. The most recent data available are now included in the indicators for the following topics: criteria air pollutants, drinking water contaminants, lead, mercury, respiratory diseases, and neurodevelopmental disorders. This new update incorporates data that have become available since the EPA published the third edition of America's Children and the Environment in January 2013. Visit [EPA's Web page](#) to learn more.

Infographics from CDC Help Communicate Environmental Health Information

Looking for an effective and engaging way to communicate environmental health information with general audiences? Check out a series of infographics created by the Centers for Disease Control and Prevention (CDC) National Environmental Public

Health Tracking Network! There are infographics for a variety of topics, including asthma and air pollution, children's environmental health, developmental disabilities and the environment, childhood lead poisoning, and more. Visit the [CDC's Web page](#) to download and share the graphics.

