

HEADLINES

SRP Welcomes New and Returning Grantees

The Superfund Research Program would like to congratulate Brown University, University of Arizona, University of Iowa, and University of Washington on their new Multiproject (P42) awards!

The [*Brown University SRP Center*](#) focuses on environmental health and remediation concerns in Rhode Island, such as research related to vapor intrusion and safe design of nanomaterials for environmental cleanup. The [*University of Arizona SRP Center*](#) concentrates on issues in the U.S. Southwest and investigates the human and environmental risks associated with metal mining in arid environments and developing innovative remediation technologies to limit these risks. The [*University of Iowa SRP Center*](#) is identifying atmospheric sources, exposures, and potential consequences to human health of semi-volatile PCBs. The overarching theme of the [*University of Washington SRP Center*](#) is to investigate the mechanisms and ramifications of metal neurotoxicity in humans and aquatic species, and develop biomarkers based upon this understanding.

The SRP is also pleased to welcome two Small Business Innovation Research / Small Business Technology Transfer Research (SBIR/STTR) grantees! New SBIR grantee [*OndaVia Inc*](#) is developing a fast, quantitative analysis of TCE in water. Returning SBIR grantee [*Airlift Environmental LLC*](#) received a Phase II grant to improve the treatment of contaminated aquifers by developing direct-push oxidant candles.

New Opportunity: 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. For more information, see the [*SRP Funding Opportunities - Multiproject Center Grants page*](#).

On Monday, December 14, 2015, from 1:00 to 2:00 p.m. ET, SRP staff will provide an informational webinar to answer questions about RFA-ES-15-019. To register for this webinar, please see the U.S. Environmental Protection Agency's (EPA) [*CLU-IN Training & Events Web page*](#).

Integrating Data from Multidisciplinary Research, Session II: Cross Domain Discovery and Integration

EMPLOYMENT OPPORTUNITIES

Baylor University - Assistant Professor of Environmental Science

Baylor University seeks to fill the position of Assistant Professor of Environmental Science in the Department of Environmental Science. The department is particularly interested to span the fields of environmental health and ecology, addressing responses of human or broader biological systems to environmental stressors; more specifically, someone to evaluate the interaction of chemical and natural stressors on human health or systems that directly influence quality of life. A successful candidate will hold a Ph.D. or equivalent in an environmental, life, physical, or health science discipline and will have a competitive research record. Post-doctoral experience is preferred. For more information and to apply, see the [*Baylor University HR page*](#). Applications will be reviewed beginning **October 9, 2015** and will be accepted until the position is filled.

Postdoctoral Research Associate - Northeastern University and Silent Spring Institute

This two-year Postdoctoral Research Associate will be part of the new NIEHS Training Program, "Transdisciplinary Training at the Intersection of Environmental Health Science and Social Science" (EH+SS), co-directed by Northeastern University's Social Science Environmental Health Research Institute and Silent Spring Institute. This Training Program will prepare scholars to be future leaders in social science-environmental health science collaborations. A combination of learning at Northeastern and Silent Spring Institute will be complemented by externships at community-based organizations. The Postdoctoral Research Associate will spend 2/3 of their time at Silent Spring Institute and 1/3 at Northeastern. For more information and to apply, see the [*Northeastern jobs page*](#).

Tenure Track Position in Department of Global Environmental Health Sciences at Tulane University

The Tulane University School of Public Health & Tropical Medicine invites applications for a tenure track faculty position in the Department of Global Environmental Health Sciences. The successful candidate will join the graduate program in Environmental Health and participate in research and teaching in the areas of global environmental

Join us for the next session in the SRP Risk eLearning webinar series, [Integrating Data from Multidisciplinary Research](#), which explores challenges and opportunities for integrating datasets related to complex environmental health problems.

In the second session on **October 27, 2015, 2-4 pm ET**, speakers will discuss goals and successes of National Science Foundation (NSF) grants and initiatives related to large, diverse, complex, longitudinal, and/or distributed datasets.

Chaitan Baru, Ph.D., on assignment as Senior Advisor for Data Science in the Computer and Information Science & Engineering Directorate at NSF, will discuss NSF initiatives in Big Data.

Ilya Zaslavsky, Ph.D., Director of the Spatial Information Systems Laboratory at the University of California, San Diego, will highlight NSF-funded projects that enable data discovery and facilitate sharing of research and expertise.

To register, visit the [SRP Risk eLearning 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:

- [SRP researchers quickly inform communities near Colorado mine spill](#)

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

- [Fry Welcomed as New UNC SRP Center Director](#)
- [Oregon State SRP Center Receives University Awards](#)

SRP Staff and Grantees Present on EPA Environmental Justice Webinar

On September 16, the U.S. Environmental Protection Agency (EPA) Technology Integration and Information Branch hosted a webinar featuring SRP grantees along with Program Administrator Heather Henry. The webinar started off with a 30 minute video, Place Matters: Where you live predicts your health, describing the myriad issues faced by those living in neighborhoods characterized by lower socioeconomic status. Following the video, SRP speakers shared insight into their research and activities related to these issues.

Lisa Gaetke (University of Kentucky SRP Center) discussed nutrition and the impacts of contaminant exposures, with a focus on her work with communities in Kentucky. Ann Aschengrau (Boston University SRP Center) discussed her research that has linked contaminant exposures with risky behaviors. Phil Brown (Northeastern SRP Center) presented on how socioeconomic status, contamination, and housing policy can affect health in lower income communities. Madeleine Scammell (Boston University SRP Center) also discussed observations from NIEHS Center activities in lower income communities. Heather Henry introduced the SRP speakers and led the discussion.

Guerinot Featured in Chemical and Engineering News

Mary Lou Guerinot, Dartmouth SRP Center Associate Director and project leader, is quoted in a recent issue of Chemical and Engineering News. The [article](#) describes the effects of inorganic arsenic on rice plants and provides information on policy relative to regulation for arsenic in food products. The writer gathered most of her information

health science and disaster management. Applicants should demonstrate strong interest or experience in interdisciplinary environmental public health research and teaching in one or more of the following areas of disaster management: planning, response, and/or recovery. See the [job announcement](#) for more information and to apply.

Postdoctoral Research Fellow - Brown University

A postdoctoral research fellow position is available to study the **basic mechanisms of disease related to environmental exposure to metals** in the laboratory of Tom Bartnikas, M.D., Ph.D., in the Brown University department of pathology and laboratory medicine. Emphasis will be placed on career development, communication skills, grantsmanship, interdisciplinary research, and implications of basic research for diagnosis and prevention of human disease. The candidate is expected to have a Ph.D. in toxicology, molecular or cell biology, biochemistry or a related field. For more information and to apply, see the [job description](#).

CURRENT RESEARCH BRIEF

Research Brief 250: [Intestinal Microbes Protect the Liver and Prevent Liver Fibrosis](#) (David Brenner, University of California, San Diego 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

Risk e-Learning Web Seminars: Integrating Data from Multidisciplinary Research
Session II - Cross Domain Discovery and Integration
October 27, 2015
2:00 - 4:00 p.m. EDT
Webinar
[Website](#)

Working with ATSDR to protect communities from hazardous substances
Research to Risk Assessment Information Exchange Webinar
Tuesday, November 10
1:30-3:00 pm ET
Webinar information coming soon

International Symposium on Persistent Toxic Substances
Co-Hosted by the University of California, Riverside
November 16 - 20, 2015

from the [Dartmouth P42 Progress in Research webinar](#) and interviewed Guerinot to verify information.

Fry Presents Epigenetics Findings at EPA Workshop

UNC Center Director Rebecca Fry presented at the recent EPA Epigenetics and Cumulative Risk Workshop, organized by Ken Olden, Director of EPA's National Center for Environmental Assessment. At the workshop, she discussed the epigenetic effects in toxicity of arsenic and other metals. Participants were interested in her [review](#) on incorporating epigenetic data into the risk assessment process for toxic metals as well as her suggestion moving forward to create a database to gather and organize findings related to epigenetics.

MSU SRP Center Initiates Community Research Project

Over the summer, MSU SRP Center research projects, along with the Research Translation Core, have been optimizing the Gene-Z analyzer for a community-based participatory research project in Michigan. The [Gene-Z analyzer](#) is a device for point of care genetic testing using a smartphone, which was developed and patented by MSU SRP Center researchers. Genes for microbial dioxin degradation, antibiotic resistance and a proxy gene for pollution have been loaded and tested in the lab and field. The gene analyzer will be donated to Midland High School in Midland, Michigan for the research project.

UNC SRP Center Holds Two-Day Environmental Health Teacher Workshop

Staff from Lake Crabtree County Park in Wake County, North Carolina, and the UNC SRP Research Translation Core teamed up in August to provide a two-day workshop for area teachers called "Cleaning Up Our Waters: Implications of Toxic Waste Sites for Ecosystems and Human Health." The workshop featured an in-depth case study of the Ward Transformer Superfund Site in North Carolina and its impacts on the surrounding community. Teachers learned strategies for introducing students to the causes, consequences, and cleanup of toxic waste at Superfund sites; examined how scientists are studying bioavailability of chemical contaminants in our waters to evaluate risk and inform clean-up; and discovered how communities have responded to toxic waste sites in their own backyards.

TRAINEE SPOTLIGHT

Rui Yu, University of North Carolina at Chapel Hill

Rui Yu is a Golberg postdoctoral research fellow under the guidance of James Swenberg in the UNC SRP Center. He is studying endogenous and exogenous formaldehyde exposure and how they induce DNA damage. Formaldehyde is a widely used chemical with well-known carcinogenicity, but is also a normal metabolite of living cells. It thus poses unique challenges for understanding risks associated with exposure.

In a [study](#) this year by Yu, he differentiated between DNA damage from endogenous and exogenous formaldehyde using ultra-sensitive assays in rodents and found remarkably lower amounts of exogenous damage than



Riverside, California

[Website](#)

2015 Annual Meeting of the Superfund Research Program

November 18-20, 2015

San Juan, Puerto Rico

[Website](#)

SRP Funding Opportunities Web Seminar

P42 Funding Opportunity

December 14, 2015

1:00 - 2:00 pm ET

[Website](#)

The International Chemical Congress of Pacific Basic Societies

December 15-20, 2015

Honolulu, Hawaii

[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

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

endogenous damage. His research supports the need to understand whether risks have been over-estimated for inhaled formaldehyde, while under-appreciating endogenous formaldehyde as the primary source of exposure that can result in bone marrow toxicity and leukemia.

Yu was recently awarded a two-year, \$160,000 grant from the [*Fanconi Anemia Research Fund*](#) to identify the nature of the endogenous aldehydes-induced DNA damage that Fanconi anemia DNA repair pathways counteract. Fanconi anemia is an inherited disease that can lead to bone marrow failure, leukemia, and other cancers. Results from this study will improve our understanding of the mechanism of bone marrow failure and leukemia caused by DNA damage and may lead to future identification of novel therapies and new drugs for managing these diseases.

When he isn't in the lab, Yu enjoys working in the yard with his wife and playing with their dog, Cindy. Yu also loves traveling, photography, classical music, and cooking.

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

HOT PUBLICATION

Moles of a Substance per Cell Is a Highly Informative Dosing Metric in Cell Culture

A recent [*paper*](#) from the University of Iowa SRP demonstrates that, in cell culture, moles of a substance per cell is a very informative dosing metric for xenobiotics (such as toxins, drugs, or experimental tools). The biological consequences upon exposure of cells in culture to a dose of xenobiotic are not only dependent on biological variables, but also the physical aspects of experiments, e.g. cell number and media volume. Dependence on physical aspects is often overlooked due to the unrecognized ambiguity in the metric used to express exposure, i.e. initial concentration of xenobiotic delivered to the culture medium over the cells. This study shows that for many xenobiotics, specifying dose as moles per cell will reduce this ambiguity.

The use of this dose-metric increases the information that can be gathered from experimental data and increases the efficiency of cell culture experiments. Importantly, it will also increase the reproducibility of experiments, both in a particular laboratory and across the scientific world because it provides an absolute quantitative basis for research results allowing for direct comparison across laboratories. Dose as moles per cell can also provide additional information not easily obtainable with traditional dosing metrics.

AWARD WINNERS

Meeker Receives CHEAR Award

A University of Michigan (U-M) team led by Northeastern SRP Center project leader John Meeker has been awarded \$9.5 million to establish a large-scale interdisciplinary research hub at the University of Michigan for the new Children's Health Exposure Analysis Resource (CHEAR) Program. Known as M-CHEAR, this grant will marshal the efforts of U-M labs focused on exposure science, environmental epidemiology, molecular biology, child growth and development, human nutrition, metabolomics, epigenomics, and more to examine how environmental exposures impact children's health. See the [*Northeastern SRP Center website*](#) for more information.

Simonich Awarded Prestigious OSU Mentoring Awards

Staci Simonich has won the University Mentoring and Professional Development award

from Oregon State University (OSU) for 2015. This award recognizes those who excel in supporting and encouraging OSU employees to participate in professional and/or educational development opportunities. Simonich also won the Excellence in Graduate Mentoring Award for 2015 at OSU. Both awards were presented and recognized at OSU University Day on Sep 21 when the university officially kicked off the 2015/2016 academic year.

Paulik Selected for Science Communication Fellowship

OSU SRP Center trainee Blair Paulik has been accepted to the Oregon Museum of Science and Industry's (OMSI) Science Communication Fellowship program in Portland, Oregon this October. As part of this program, she will collaborate with OMSI educators to develop a novel, hands-on educational activity and display focusing on SRP research from Kim Anderson's lab.

WEBINARS

Working with ATSDR to protect communities from hazardous substances

The Research to Risk Assessment Interagency Working Group hosts information exchange webinars to enhance the understanding of the U.S. Environmental Protection Agency (EPA) and the Agency for Toxic Substances and Disease Registry (ATSDR) by focusing on the informational needs of SRP researchers, particularly trainees.

In this session on **Tuesday, November 10, 1:30-3:00 pm ET**, Ben Gerhardstein, a public health advisor with ATSDR, will discuss how SRP grantees can work with ATSDR to protect communities from exposure to hazardous substances. Mark your calendar and stay tuned for more information.

EPA's Tribal Science Webinar Series Kickoff

The EPA Sustainable and Healthy Communities Seminar Series presents the Tribal Science Webinar Series Kickoff. This free monthly series will serve as a forum for discussing the complex environmental issues facing many tribal and indigenous communities by featuring a wide variety of expert guest speakers from government, academic institutions, and other organizations. The topic for the October 2015 Tribal Science Webinar is "Native Science and Environmental Health: Discussions on Research, Traditional Knowledge and Community Health." The webinar will be held **Tuesday, October 13, 2015 from 3:00 to 4:30 pm EDT**. Please [register](#) in advance to attend. The Tribal Science Webinars are co-hosted by the National Center for Environmental Research and the Office of Science Policy.

CALL FOR ABSTRACTS

Call for Environmental Health Research Presentations at APHA Sessions

Each year, before the American Public Health Association (APHA) conference, *Partnerships for Environmental Public Health* compiles a "PEPH at APHA" booklet. This document is meant to help you navigate the large meeting so you can quickly and easily find the sessions in which environmental public health colleagues are participating. If you are an NIEHS grantee or community partner presenting at APHA this year, let PEPH know by mid-October! If you will be participating at APHA, please send you name, presentation/poster title and date, link to abstract, and any awards or honors you may be receiving at the meeting to peph@niehs.nih.gov with "APHA Info"

in the subject line.

FUNDING OPPORTUNITIES

Multiproject Center Grants Request for Applications

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INTERAGENCY NEWS

EPA Adds Five Hazardous Waste Sites to Superfund's National Priorities List & Proposes an Additional Seven

At the end of September, the U.S. Environmental Protection Agency (EPA) added five hazardous waste sites that pose risks to human health and the environment to the Superfund National Priorities List (NPL). A separate action includes a proposal to add seven sites to the list. The sites are in Illinois, Louisiana, Massachusetts, Texas, and Washington with characteristics and conditions that vary in size, complexity, and contamination. For more information, see the [*EPA news release*](#).