

Superfund Research Program e-Posted Notes

June 8, 2018 (Issue 173)

HEADLINES

Save the Date: 2018 SRP Annual Meeting

Please save the date for the [2018 SRP Annual Meeting](#) on November 28-30 in Sacramento, California. The University of California (UC) Davis SRP Center, in collaboration with the SRP Centers from UC Berkeley and UC San Diego, will be hosting the meeting. Planning has begun for the overall program and organizing committees are being formed.

2018 KC Donnelly Award Winners Announced

Congratulations to the eight exceptional SRP trainees who received a 2018 K.C. Donnelly Externship Award Supplement to enrich their research in environmental health science. The award provides the SRP trainees with funding for an externship (up to three months) at other SRP centers, government laboratories, and state, local, or tribal agencies to support transdisciplinary research and collaboration.

The 2018 winners are:

- Jitka Becanova (University of Rhode Island)
- Krisa Camargo (Texas A&M University)
- Stephanie Eick (University of Georgia/Northeastern SRP Center)
- Priyanka Kushwaha (University of Arizona)
- Laura Magana (University of California, Berkeley)
- Anne Nigra (Columbia University)
- Rishabh Shah (University of Kentucky)
- Savannah Volkoff (Duke University)

For more on the winners and information about their externships, visit the SRP [K.C. Donnelly 2018 Winners](#) page.

Archives Available from the Risk e-Learning Webinar Series

If you were unable to attend one or more of our Risk e-Learning webinar sessions on New Approaches and Alternatives for Toxicity Testing, you can now access the webinar archives on the [SRP Risk e-Learning website](#). The series featured groundbreaking research that may be useful as new approaches and methodologies for evaluating the safety of chemicals. The

EMPLOYMENT OPPORTUNITIES

Jobs at Gradient

Gradient is [currently recruiting](#) talented and qualified individuals to join their team, including environmental engineers, epidemiologists, biostatisticians, toxicologists, geologists, and database specialists. Critical thinking, supported by a foundation of rock-solid scientific, research, writing, and client development skills are hallmarks of successful Gradient staff.

For more information about Gradient, see its [Careers Overview](#) document.

Environmental Risk Assessor / Epidemiologist – Virginia Tech

Virginia Tech's Department of Population Health Sciences seeks to attract a tenured or tenure-track faculty member in environmental health. Priority will be given to applications at the Assistant Professor rank.

The position is part of a robust and diverse cluster of faculty contributing to transdisciplinary research, teaching, and/or outreach initiatives that align with Virginia Tech's "Global Systems Science Destination Area." This initiative is focused on transdisciplinary solutions to critical social problems stemming from human activity and environmental change. Visit the

series attracted more than 1,000 live participants over three sessions.

A huge thank you to the SRP grantees who presented during the webinar series: Erin Baker, Ph.D., Pacific Northwest National Laboratory; Weihsueh Chiu, Ph.D., Texas A&M University; April Rodd, Ph.D., Brown University; Lisa Truong, Ph.D., Oregon State University; Chris Vulpe, M.D., Ph.D., University of Florida; as well as former SRP trainee Jim Rice, Ph.D., Gradient.

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:

- [Distinguished Lecture highlights mechanisms of liver cancer](#): NIEHS Distinguished Lecturer Michael Karin, Ph.D., began his presentation by saying the war on cancer has been successful — except when it comes to liver cancer.
- [Enzyme plays key role in Parkinson's disease and inflammation](#): New research partially funded by NIEHS suggests an enzyme in the brain plays a key role in Parkinson's disease (PD). Scientists demonstrated that inhibiting an enzyme known as soluble epoxide hydrolase (sEH) can help curb the inflammation associated with the development and progression of PD.
- [NIEHS brings environmental focus to One Health meeting](#): Scientists, researchers, professionals, and government representatives from more than 35 countries gathered April 29-May 2 to explore new solutions to pressing global health issues and to promote interdisciplinary collaborations.
- [Paper of the Month: Kitchen cabinets emit potentially harmful PCBs](#): SRP grantees discovered that finished cabinetry is a predominant and previously unknown source of airborne polychlorinated biphenyls (PCBs) in residential homes.

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

- [Public Webinar Outlines Latest PFAS Exposure and Health Research](#): New information on per- and polyfluoroalkyl substances (PFAS) in drinking water and potential health effects was the focus of a May 1 Collaborative on Health and the Environment (CHE) webinar. The webinar was co-organized by the Boston University (BU) Superfund Research Program (SRP) Center.
- [EPA Adds Six Hazardous Waste Sites to the National Priorities List](#): The U.S. Environmental Protection Agency (EPA) recently announced that it added six hazardous waste sites to the National Priorities List (NPL) of Superfund sites. In addition, EPA is proposing to add four additional sites to the list.

[Global Systems Science page](#) for more information.

This position will be based on the main campus of Virginia Tech, a land-grant university in Blacksburg, Virginia, situated in the scenic New River Valley. For more information and to apply, visit the [job posting](#).

Tenure Track Faculty Position – University of Rochester

The Department of Environmental Medicine at the University of Rochester School of Medicine and Dentistry invites applications for an Assistant or Associate Professor in the tenure track. The Department is especially interested in candidates with a passion for biomedical research focusing on how the environment shapes health and influences disease. Applicants interested in studying the fundamental mechanisms of toxicity, developmental origins of health and disease, and/or environmental effects on stem/progenitor cells are particularly encouraged to apply. The Department is home to an outstanding interdepartmental NIEHS P30 Core Center and the Rochester Toxicology Training Program, as well as two clinical programs in occupational medicine. Applicants must have a Ph.D. or M.D. degree, a track record of research accomplishments, and demonstrated interest in tackling significant topics relevant to environmental health and toxicology using state-of-the-art approaches. Visit the [University of Rochester job opportunities website](#) for more information and to apply.

CURRENT RESEARCH BRIEF

[Research Brief 282: Toxic Effects of Dust from Mine Waste in Navajo Nation](#) (Matthew Campen, University of New Mexico)

Past [Research Briefs](#) are available

Neilson Talks Microbes in the Atlantic and Science

University of Arizona SRP Center researcher Julia Neilson was interviewed by both [The Atlantic](#) and [Science](#) as a technical expert on the microbial communities of the Atacama Desert in Chile. Neilson's work in the Atacama focuses on how microbial diversity is affected by a precipitation gradient and how stressors to the soil microbiome affect its function.

Anderson's Passive Wristband Samplers Highlighted by Local News

Oregon State University SRP Center researcher Kim Anderson was highlighted by local [KTVZ news](#). The press release describes how passive wristband samplers are being used to detect environmental pollutants and linking those exposures with chemicals measured in the body.

Shuey and Campen Featured in Mining Documentary

A short [documentary](#) about uranium mining on the Navajo Nation includes interviews with University of New Mexico SRP Center researchers Chris Shuey and Matt Campen. They discussed how residents are exposed to contaminants at mining sites and how they can impact human health.

Grantees Featured in Environmental Health Perspectives

SRP grantees were featured in an article in [Environmental Health Perspectives](#) about collecting exposure data using wearable wristband sensors. SRP Center researchers Jennifer Horney of Texas A&M, Heather Stapleton of Duke, and Kim Anderson of Oregon State University discussed how the wristbands work and how they're being used to study what people are exposed to in several studies. For example, in Texas they are being used to measure what contaminants residents have been exposed to in the Houston area after Hurricane Harvey.

Hoover Highlights Environmental Health on National Media Tour

University of Kentucky SRP Center's Anna Hoover participated in a national media tour in which she discussed environmental health protections and other critical capabilities to protect populations across the U.S. before, during, and after public health emergencies. Interviews included the national publication [Fierce Healthcare](#); statewide and regional newspapers; and nearly a dozen radio interviews from New Jersey to Washington state, including public radio networks in [Hawaii](#) and [Nevada](#).

Lohmann Discusses Well Testing with Local Public Radio

University of Rhode Island SRP Center Director Rainer Lohmann was recently interviewed by [local public radio](#). Lohmann discussed how Center researchers are testing private wells in Cape Cod for possible contaminants, including perfluorooctanoic

on the SRP website. To receive the monthly Research Briefs or to submit ideas, email Michelle Heacock (heacockm@niehs.nih.gov).

SRP EVENTS

[Central and Eastern European Conference on Health and the Environment \(CEECH\)](#)

June 10 – 14, 2018

Krakow, Poland

[Innovations at the Intersections of the Aquatic Sciences: Water Quality, Health, Materials, Technologies](#)

June 24 – 29, 2018

Holderness, New Hampshire

[Total Exposure Health: Bridging Human Exposure & Precision Medicine](#)

September 6 – 7, 2018

Bethesda, Maryland

[2018 International Experimental Biology and Medicine Conference \(IEBMC\)](#)

October 19 – 21, 2018

Chengdu China

[Annual Meeting of the Superfund Research Program \(SRP\)](#)

Hosted by the UC Davis SRP Center in collaboration with the UC Berkeley and UC San Diego SRP Centers

November 28 – 30, 2018

Sacramento, California

GET UPDATES FROM OTHER SRP GRANTEEES

To see the latest SRP grantee publications, visit the [SRP publications page](#).

Visit the [SRP Materials for Grantees page](#) for helpful information, such as SRP administrative supplements information, SRP best practices, guidelines for NIEHS logo use, and the Data Collection Form.

See the [SRP Science Digest](#) to read more about recent SRP research

acid, and investigating where measured contaminants are coming from.

MIT Launches Newsletter

The Massachusetts Institute of Technology SRP Center recently launched a newsletter to keep the SRP community up to date on their activities. You can also access their updates on the [MIT SRP Center news page](#).

TRAINEE SPOTLIGHT

Nghiem Works to Improve Arsenic Mitigation in the U.S. and Abroad

Athena Nghiem is a doctoral student with the Columbia University SRP Center whose research focuses on understanding the many chemical, biological, and geological factors that influence the behavior of arsenic in groundwater.



Under the mentorship of [Benjamin Bostick](#), Ph.D., Nghiem is exploring how the iron mineral magnetite can help capture arsenic and clean up groundwater at Superfund sites in the U.S. She has also conducted field work in the Red River Delta and Hanoi, Vietnam to study naturally occurring arsenic and how human activity increases the amount of arsenic in groundwater using state of the art techniques.

Nghiem is working to create better arsenic mitigation strategies to improve water quality and protect human health. She finds her work in Southeast Asia particularly meaningful since her paternal grandparents originated in the same region where she now conducts field work.

Recently, Nghiem was awarded a prestigious 2018 National Science Foundation (NSF) Graduate Research Fellowship. The [NSF Graduate Research Fellowship Program](#) recognizes and supports outstanding graduate students in science, technology, engineering, and mathematics. The fellowship will allow her more flexibility in exploring additional research questions and will open up unique opportunities, including research abroad.



Nghiem supervises several undergraduate research assistants, and mentors many more at the all-female Barnard College. She also participates in local events aimed at communicating science

highlights and activities.

The [SRP Events page](#) contains information about upcoming meetings, seminars, and webinars.

The SRP website also has [Search Tools](#) to help you learn more about projects funded by the Program.

JOIN THE @SRP_NIEHS KNOWLEDGE NETWORK ON TWITTER

NIEHS uses Twitter, a popular social media tool, for information sharing through tweets. Many SRP Centers also have accounts, and it would be great if all participated! Follow us [@SRP_NIEHS](#) to instantly hear news about the Program, noteworthy publications, events, and job opportunities for trainees.

CONTACT INFORMATION

Need to get in touch with an NIEHS SRP staff member? Check out our [Contact Staff](#) page.

to young children and the public, such as at the Lamont-Doherty Open House and Girls Science Day at Columbia.

Outside the lab, she likes to explore local coffee shops in New York City. She also enjoys graphic design, which comes in handy for her many research posters and presentations.

HOT PUBLICATION

The Influence of Hydrogeological and Anthropogenic Variables on Phthalate Contamination in Karst Groundwater Systems

New research out of Northeastern SRP Center has characterized factors that influence the variability and movement of [phthalates in karst aquifers](#). Karst aquifers are a type of groundwater system that supplies drinking water in Puerto Rico, as well as in several U.S. regions and around the world. Karst aquifers contain cave systems that are vulnerable to contamination from potentially hazardous substances, like phthalates, which are used in many consumer products and may harm human health.

Because they are widely used, identifying the sources of phthalates in the environment can be difficult. The researchers assessed the occurrence of phthalates in karst aquifers in Puerto Rico and evaluated the factors that influenced the distribution and measured concentration of the contaminants.

Their analysis showed extensive presence of phthalates from dispersed sources throughout the aquifers. They also determined that hydrogeological factors, such as time and hydraulic conductivity, are among the most influential factors in predicting the presence and concentration of phthalates. Human factors, such as population and land use, did not correlate with phthalates.

The study indicated continuous sources of phthalates to the aquifer, and the high capacity of the karst aquifer to store and slowly release contaminants over time. According to the authors, these findings will improve how scientists predict where phthalates occur.

AWARD WINNERS

Pearson Selected as UK-CARES Fellow

Kevin Pearson was selected as the University of Kentucky Center for Appalachian Research in Environmental Science (UK-CARES) Fellow in Science Communication. The year-long program provides early career faculty with skills training for communicating science to a broader audience and enhances their capacity for outreach and success in research, teaching, and service.

Neilson Named Director of UAZ Mining Center

Julia Neilson was recently named the director of the University of

Arizona Center for Environmentally Sustainable Mining (CESM). The CESM was established by the UA SRP in partnership with the University of Arizona Lowell Institute for Mineral Resources to broaden the impact of UA SRP research and to incorporate UA SRP findings into mining and regulatory practice.

Preston Awarded Donovan Scholarship in Gerontology

University of Kentucky graduate trainee Joshua Preston was awarded a 2018-2019 Donovan Scholarship in Gerontology. This scholarship supports students studying in the field of aging. This is the second time that Josh has received this award.

Jennings receives Rising Leader award

University of Arizona trainee Lydia Jennings received the 2018 American Indian Science and Engineering Society (AISES) Rising Leader Award. Jennings was selected for the award by 250 fellow students at the 2018 AISES Leadership Summit. AISES is a national, nonprofit organization focused on increasing the representation of American Indians and other indigenous peoples of North America in science, technology, engineering and math.

WEBINARS AND TRAININGS

Community Involvement Training Program

The [Community Involvement Training Program](#), **July 18-19, 2018**, will be held at the InterContinental Kansas City at The Plaza Hotel. The U.S. Environmental Protection Agency (EPA) Community Involvement Training (CIT) Program brings together people from EPA, agency partners, and stakeholders who plan and implement community involvement, partnership, stewardship, outreach, and education programs. The CIT provides an important, comprehensive, in-person forum to promote interactions among and between the EPA and state, local, federal, and tribal community representatives as well as academia and private industry. There will also be a Superfund Only Day (formerly known as "Superfund Monday") on **Tuesday, July 17**.

One Water Summit

The [One Water Summit](#), **July 10-12, 2018**, is hosted by U.S. Water Alliance and Metropolitan Council and will bring hundreds of water leaders from across the country together at the Hyatt Regency Minneapolis for thought-provoking conversations on how to achieve a sustainable water future for all.

CALL FOR ABSTRACTS

Total Exposure Health Conference

Posted abstracts are being accepted for the [Total Exposure Health Conference](#), **September 6-7, 2018**, in Bethesda, Maryland. The conference will focus on the application of

exposure science to precision medicine. This conference introduces key exposure and health challenges for the military, military veterans, and the greater public. Advancements in toxicology, exposure science, and precision medicine will be presented and discussed in the context of real-world issues applicable to stakeholder interests. The abstract deadline is **July 26, 2018**.

FUNDING OPPORTUNITIES

Department of the Interior Grant Opportunity

The Department of the Interior Office of Trust Services, Tribal Resilience Program is [soliciting proposals](#) from tribal not-for-profit and tribal non-governmental organizations and associations to receive grants to support tribal resilience and ocean and coastal management and planning. This program supports tribes preparing for extreme events and harmful environmental trends that impact tribal treaty and trust resources, economies, infrastructure, and human health and safety. The Program will provide funding for projects that support tribal resilience and ocean and coastal management planning as tribes incorporate science (including Traditional Knowledge) and technical information to prepare for the impacts of extreme events and harmful environmental trends.

Awards will be made to projects that address vulnerability to extreme events and harmful environmental trends through development of regionally focused or topically focused training, adaptation planning and data development, and travel to access training and attend technical workshops to build skills and capacity. Awards will also support projects that ensure tribal participation in ocean and coastal (including the Great Lakes) cooperative planning and projects for resource health, resiliency, community safety, and economic security for present and future generations.

Applications are due **July 12, 2018**.

EPA Releases PFAS Request for Applications

The EPA is seeking [applications](#) that generate new information for nationally assessing per- and polyfluoroalkyl substances (PFASs) fate and transport, exposure, and toxicity. PFASs are manmade chemicals designed to resist heat, water, and oil. Used in a variety of consumer products and industrial applications, PFASs are moderately to highly water soluble, persistent, bio accumulative, and toxic.

The awards will inform new strategies that protect public health and the environment from PFAS exposure and adverse outcomes. The EPA anticipates funding approximately two awards under this request for applications for a total of \$1,984,400. Visit the [EPA website](#) for information on eligibility, project specifications, and how to apply.

EPA Announces New Funding for Water Infrastructure Projects

The EPA announced the availability of funding that could provide as much as \$5.5 billion in loans, which could leverage over \$11 billion in water infrastructure projects through the [Water Infrastructure Finance and Innovation Act \(WIFIA\) program](#). The funding will leverage public and private investments to keep lead and other contaminants out of drinking water and upgrade aging water infrastructure. Prospective borrowers seeking WIFIA credit assistance must submit a letter of interest by **July 6, 2018**.

EPA Wetland Program Development Grants

Wetland Program Development Grants ([WPDGs](#)) provide eligible applicants an opportunity to conduct projects that promote the protection, management, and restoration of wetlands. States, tribes, local governments, interstate associations, and intertribal consortia are eligible to apply for the Regional WPDG Request for Proposals. Application deadlines **vary by region**.

Department of Commerce FY17 Economic Development Assistance Programs

The Economic Development Administration (EDA) [solicits applications](#) from applicants in rural and urban areas to provide investments that support construction, non-construction, technical assistance, and revolving loan fund projects under EDA's Public Works and Economic Adjustment Assistance programs. Grants and cooperative agreements made under these programs are designed to leverage existing regional assets and support the implementation of economic development strategies in distressed communities. This opportunity does not have a submission deadline.

DATA SCIENCE AND DATA SHARING

NIH Releases Strategic Plan for Data Science

The National Institutes of Health (NIH) released its first ever [Strategic Plan for Data Science](#) to capitalize on the opportunities presented by advances in data science. The Strategic Plan provides a roadmap for modernizing the storing, managing, standardizing, and publishing the vast amounts of data produced by NIH-funded biomedical research.

The plan describes NIH's overarching goals, strategic objectives, and implementation approach for modernizing the NIH-funded biomedical data science ecosystem. Over the next year, NIH will begin implementing its strategy and will continue to seek community input during the implementation phase.

NIH's vision is to move toward a common framework upon which individual ICs and scientific fields will build and adapt. The highly interconnected strategic plan is made up of five overarching goals:

- Support a highly efficient and effective biomedical research data infrastructure.
- Promote modernization of the data-resources ecosystem.
- Support the development and dissemination of advanced data management, analytics, and visualization tools.
- Enhance workforce development for biomedical data science.
- Enact appropriate policies to promote stewardship and sustainability.

Accessible, well-organized, secure, and efficiently operated data resources are critical to modern scientific inquiry. By maximizing the value of data generated through NIH-funded efforts, biomedical discoveries and medical breakthroughs for better health outcomes can be accelerated.

PHOTO OF THE MONTH



University of California, Berkeley SRP Trainees hosted a SuperFUN Research Program Booth as part of the [CalDay](#) family event for the second year in a row. Trainees shared the Center's research and goals through age-appropriate activities including a water filtration experiment and dry-ice bubble-making. (Photo courtesy of UC Berkeley SRP Center)

INTERAGENCY NEWS

Request for Data and Information on Technologies Used for Identifying Potential Developmental Toxicants

NTP Interagency Center for the Evaluation of Alternative Toxicological Methods (NICEATM) requests available data and

information on approaches and/or technologies currently used for identifying potential developmental toxicants. Submitted information will be used to assess the state of the science and determine technical needs for non-animal test methods used to evaluate the potential of chemicals to induce adverse effects in offspring.

Respondents to this request should provide information on any activities relevant to the development or validation of alternatives to in vivo developmental toxicity test methods currently used by federal agencies for regulatory and other decision contexts.

NICEATM also requests available data from in vivo developmental studies, human or animal studies, or accidental human exposures, using the same chemicals used to evaluate the alternative developmental toxicity test methods.

June 15, 2018 is the deadline for receipt of the requested information. More information is available on the [NICEATM website](#).

U.S. EPA Adds Six Hazardous Waste Sites to the National Priorities List

The U.S. Environmental Protection Agency (EPA) [recently announced](#) that it added six hazardous waste sites to the National Priorities List (NPL) of Superfund sites. In addition, EPA is proposing to add four additional sites to the list. Proposed and newly added NPL sites may offer opportunities for SRP grantees to conduct research.

U.S. EPA Opens Three Important Actions for Public Comment

The EPA released three actions for public comment focused on how EPA plans to evaluate the ten chemicals undergoing risk evaluation, select studies, and use the best available science to ensure chemicals in the marketplace are safe.

- In June 2017, EPA published the scope of the risk evaluations to be conducted for the first 10 chemicals that are the subject of the EPA's initial chemical risk evaluations. They have now published [problem formulation documents](#), which refine the scope of risk evaluations and clarify the chemical uses EPA expects to evaluate. Comments on the problem formulation documents are due within 45 days of publication in the Federal Register.
- EPA's systemic review approach [document](#) that guides EPA's selection and review of studies. Comments are due within 45 days of publication in the Federal Register.
- A proposed significant new use rule ([SNUR](#)) to prevent new uses of asbestos. Comments are due within 60 days of publication in the Federal Register.

U.S. EPA Updates ECOTOX

The EPA recently updated their publicly available application for

environmental chemical toxicity data, called [ECOTOX](#), which is useful for assessing the effects of chemical exposures on aquatic life, terrestrial plants, and wildlife.

[ECOTOX 5.0](#) is now available in beta version. The update includes more advanced data and search capabilities, a default output focusing on critical data, new graphical data visualization tools, and direct linkages to other EPA chemical knowledgebases. These updates will help regulated industries, regulators, researchers, and others to more rapidly and easily search for data of interest, and to identify the most critical data from outputs in response to data queries. EPA welcomes [feedback](#) on the beta version before it is finalized.

ECOTOX is the primary source of toxicity data used by EPA regulatory programs to develop chemical assessments to meet requirements for the Clean Water Act; the Federal Insecticide, Fungicide, and Rodenticide Act; and the Comprehensive Environmental Response, Compensation, and Liability Act.

