National Institute of Environmental Health Sciences

Superfund Research Program

e-Posted Notes

October 7, 2022 (Issue 225)

HEADLINES

SRP Welcomes New and Returning Multiproject Centers

SRP welcomes 11 new and returning multiproject centers to the program. Our new centers are at Wayne State University, Yale University, and Columbia University. We are also pleased to announce renewed centers at Duke University, Massachusetts Institute of Technology, Michigan State University, Texas A&M University, University of California (UC), Berkeley, University of Louisville, University of New Mexico (UNM), and University of Rhode Island (URI).

Information about each center is available on the SRP Currently Funded Multiproject Center Grants site.

2022 K.C. Donnelly Externship Awards

SRP congratulates seven exceptional trainees who received a 2022 K.C. Donnelly Externship Award Supplement. This year's awardees are:

- Laura Dean, University of Iowa
- Rebecca Dickman, State University of New York at Buffalo
- Avinash Kumar, Louisiana State University (LSU)
- Francisco Léniz, University of Kentucky (UK)
- Martine Mathieu, North Carolina State University (NCSU)
- Charlotte Wirth, Harvard University
- Melissa Woodward, URI

SRP Annual Meeting Registration Open

Registration for the SRP Annual Meeting is open. The early bird registration deadline is **October 15.**

The annual meeting will be held **December 14-16** in Raleigh, North Carolina. We look forward to seeing you there!

SRP Risk e-Learning Webinar Series: Climate Change and Health

SRP is hosting a three-part Risk e-Learning webinar series focused on scientific research and tools that can be used to promote health and resilience to climate change:

- Session I, **October 7, 1-3 pm ET**: Reducing Exposures and Promoting Resilience
- Session II, **November 4, 1-3 pm ET**: Untangling Complex Exposures and Health Effects

EMPLOYMENT OPPORTUNITIES

Staff Scientist at NIEHS Veterinary Medicine Section

The Comparative Medicine Branch of NIEHS is recruiting a staff scientist for the Veterinary Medicine Section under the leadership of Terry Blankenship-Paris. The staff scientist responsibilities will include reviewing animal study protocols and providing oversight to animal research projects.

Senior Scientist Position at EPA

The Office of Research and Development (ORD) at EPA has an opening for a senior scientist within the Center for Environmental Solutions and Emergency Response. This position will serve as the ORD Lead for the new Community-Engaged Research Collaborative for Learning and Excellence, located at EPA's Edison Environmental Center in Edison, New Jersey.

OHSU-PSU Seeking Assistant Professor

The joint Oregon Health and Science University and Portland State University (OHSU-PSU) School of Public Health, Environmental Systems and Human Health Program is seeking a new assistant professor. The faculty member will contribute research expertise in the areas of the impacts of climate change on indigenous populations and implementing environmental health solutions using systems approaches.

- Session III, **November 18, 1-3 pm ET**: Documenting Exposures and Promoting Health

FRTR Fall Meeting Registration Open

Registration for the Federal Remediation Technologies Roundtable (FRTR) Fall 2022 Meeting is now open. The meeting will be held **November 8** and will explore changing needs and opportunities for interagency collaboration in advancing innovative remediation technology.

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:

- Superfund Research Program trainees win prestigious K.C. Donnelly awards: Seven trainees with the NIEHS SRP have earned K.C. Donnelly Externship Award Supplements, which enable graduate students and postdoctoral researchers to learn techniques relevant to their work from experts at outside institutions.
- Role of complex exposures in breast cancer highlighted during workshop: Current breast cancer research and efforts to evaluate how combined exposures can influence the disease were discussed during an NIEHS-led event.
- NIEHS hosts second annual DRIVEN! networking event: At NIEHS, any researcher who has an active grant with at least two years remaining can apply for a diversity supplement grant.
- PFAS, worker safety, data sharing, and more on tap at Council meeting: The National Advisory Environmental Health Sciences Council approved the continuation of a key funding mechanism for SRP during its 167th meeting, held September 13-14.
- Collman named to inaugural fellows' cohort at international conference: NIEHS held a strong presence at the 34th Annual Conference of the International Society for Environmental Epidemiology (ISEE), held online and in-person September 18-21 in Athens, Greece.
- Extramural Paper of the Month: Triclosan can be passed through milk, increase risk of liver disease: UC San Diego SRP researchers found that newborn mice can be exposed to the antibacterial chemical triclosan through breastmilk, leading to increased liver disease risk.
- Extramural Paper of the Month: Link between exposure to wildfire smoke and cardiovascular harm revealed: SRP researchers at the University of North Carolina at Chapel Hill (UNC) uncovered the biological mechanisms by which exposure to wildfire smoke harms the heart and lungs in mice.

Visit the SRP page for more stories about the program:

- SRP Summer Interns Shine at NIEHS Poster Competition: SRP summer interns Anna Kremer and Kirsten Reid

University of Louisville Faculty Opening

The Department of Pharmacology and Toxicology at the University of Louisville to serve as Director of the Graduate Program and/or Department Vice Chair. Candidates should have a doctoral degree in pharmacology, toxicology, or related discipline, and must be able to support student research training.

UK Seeking an Environmental Health Professor

The UK College of Public Health is looking for an associate professor to expand its environmental health program capacity in exposure science. Candidates will be expected to perform collaborative research, offer mentorship to UK students, and provide service to committees and professional organizations.

UC Merced Hiring Public Health Professor

The Department of Public Health at UC Merced is hiring a tenure-track assistant professor of public health. Applicants should have a strong interest in either infectious disease, global health, policy, implementation science, or evaluation.

Postdoctoral Researcher Opening at UW

The Department of Civil and Environmental Engineering at the University of Washington has an opening for a full-time postdoctoral researcher in air quality modeling and environmental justice in the Marshall Research Group. Candidates should have experience using air pollution models — especially chemical transport models and geospatial data — and a passion for advancing environmental justice via research and working with community groups.

University of Minnesota Seeks Professor

The University of Minnesota's

presented their summer research projects in a virtual poster showcase along with interns and trainees from across NIEHS on July 28.

- Combining Biostatistics and Genomics Research to Prevent Disease: Andres Cardenas, of the UC Berkeley SRP Center, explained in a Story of Success how he applies his epigenetics expertise to investigate the contribution of environmental exposures to the development of diseases, and how to prevent them.

URI Researchers Interviewed About PFAS

Elsie Sunderland, project leader at the URI SRP Center, was quoted in a BBC News article, a VOX.com article, and a Boston National Public Radio article about the association between per- and polyfluoroalkyl substances (PFAS) exposure and disease. According to Sunderland, PFAS can be found in soil, water, and air and are very difficult to destroy.

Project leader Philippe Grandjean was interviewed in a Harvard Crimson article about the harmful impacts of PFAS accumulation in the body. According to Grandjean, PFAS can build up in the body and harm health, potentially altering the immune function of children and newborns.

George Talks Arsenic in Well Water

Andrew George, of the UNC SRP Center, was quoted in an NC Policy Watch article about the presence of cancer-causing arsenic in well water. According to George, the location and depth of a well affect arsenic presence.

Hoppin's GenX Research Highlighted

A recent study by Jane Hoppin, of the NCSU SRP Center, was featured by NCSU News. Hoppin's research focuses on GenX, a specific type of PFAS, and its effects on cholesterol levels and health.

Quetawki Talks Art and Empowerment

Mallery Quetawki, Zuni Pueblo member and collaborator of the UNM SRP Center, was interviewed in a Southwest Contemporary article about her environmental artwork. Quetawki uses her art to help Native communities understand the risks that heavy metals such as uranium can pose to their health.

TRAINEE SPOTLIGHT

Examining Environmental Exposures and Children's Brain Function

This month we spoke with Roheeni Saxena, a postdoctoral trainee at the Columbia University SRP Center studying the effects of environmental exposures on brain development.

What is the focus of your

School of Public Health seeks an assistant/associate professor in Industrial and Occupational Hygiene within the Division of Environmental Health Sciences. Candidates must hold a Ph.D. or equivalent degree, be able to develop an independent research program, develop and teach courses, and participate in outreach and service.

CURRENT RESEARCH BRIEF

SRP Research Brief 334: Disentangling Relationships Between Arsenic and the Gut Microbiome (Rebecca Fry and Kun Lu, UNC)

Past Research Briefs are available on the SRP website. To receive the monthly Research Briefs or to submit ideas, email Sara Amolegbe (sara.amolegbe@nih.gov).

EVENTS

Risk e-Learning Webinar Series
October 7, November 4 & 18
Virtual

42nd International Symposium on Halogenated Persistent Organic Pollutants
October 9-14, 2022
New Orleans, Louisiana

11th Conference on Metal Toxicity and Carcinogenesis
October 16-19, 2022
Montreal, Canada

Distinguished Lecture Seminar Series – Magdalena Zernicka-Goetz
November 8, 2022
Durham, North Carolina and Virtual

Data Curation Network Event: Applying the CURATE(D) Model for Data Curation
November 15, 2022
Virtual

SRP Annual Meeting
December 14-16, 2022
Raleigh, North Carolina, and Virtual

American Association for the Advancement of Science (AAAS)

research?
I combine methods from neuroscience and epidemiology to investigate the effects of environmental exposures on child and adolescent brain function. I identify biomarkers — molecules in the body that indicate disease or chemical exposures — to examine the effects of metals, pesticides, and social determinants of health, with the goal of improving neurological outcomes for populations that have been marginalized. This is important to public health because cognitive function influences every aspect of an individual's life, including their education, interpersonal relationships, and professional achievements.

Tell us about how mentorship and collaborations have been important to you.
Through my work with the Columbia SRP Center, I have been fortunate to meet wonderful mentors, including my pre-doctoral mentors, Mary Gamble, Joseph Graziano, Ana Navas-Acien, and others, and my postdoctoral fellowship mentors, Diane Re and Marianthi-Anna Kioumourtzoglou. The collaborative environment of the Columbia SRP allowed me to hone my interdisciplinary research focus on the cognitive effects of environmental exposures as measured by biomarkers.

What factors have contributed most to your growth as a researcher throughout your time as an SRP trainee?
The team-science culture fostered by the Columbia SRP Center helped me learn how to integrate concepts from different disciplines into my work. I appreciate the rare opportunity to develop fluency in both toxicology and epidemiology.

What is one piece of advice that you have for other SRP trainees?
Public health research is a team sport, requiring many diverse specialists as the field moves forward to investigate more complex health determinants and outcomes. I recommend that trainees fully embrace the SRP's collaborative and interdisciplinary spirit to develop their own team-science skills!

HOT PUBLICATION

Passive Samplers Accurately Measure PFAS in Water

Researchers at the URI SRP Center demonstrated that passive samplers can better capture PFAS concentrations over time in diverse aquatic environments.

PFAS are a class of widely used and extremely persistent chemicals found globally in air, soil, and water. As PFAS are increasingly associated with negative health effects in humans, it is important to understand their distribution throughout the environment.

Annual Meeting
March 2-5, 2023
Washington, D.C. and Virtual

GET UPDATES FROM OTHER SRP GRANTEES

To see the latest SRP grantee publications, visit the SRP Grantee 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 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.

Typical water sampling methods for PFAS are discrete, meaning they provide a snapshot of PFAS concentrations at one point in time. Passive sampling — an environmental monitoring technique that allows pollutants to collect and accumulate on a sampler over time — may provide a more representative picture of average PFAS levels. It may also reduce costs by eliminating the need for frequent sampling trips.

In this study, the researchers tested the ability of a new passive sampler, consisting of a hollow plastic tube filled with adsorbent powder, to take up PFAS in a variety of surface water environments. They deployed the passive samplers for one month in water discharged from two wastewater treatment plants (WWTPs), as well as at nine sites throughout Rhode Island's Narragansett Bay. The researchers also collected daily water samples from the WWTP locations to measure actual PFAS concentrations that could be compared to the samplers.

After extracting and analyzing the samples for 24 common PFAS, they found good agreement between the discrete samples and estimated passive sampler concentrations, mostly within 50% of the measured concentrations. The highest PFAS levels were detected in the northern part of the Bay, closest to the largest cities and industrial sites, but the team noted PFAS concentrations varied over time.

According to the authors, passive samplers may be useful for understanding contaminant concentrations in dynamic surface waters, and they may provide a suitable long-term monitoring tool for PFAS.

AWARD WINNERS

Maier and Chief: Women of Impact

Director Raina Maier and project leader Karletta Chief of the University of Arizona (UArizona) SRP Center won Women of Impact Awards from the university's Office of Research, Innovation, & Impact.

Jackson Awarded NIH Instrumentation Grant

Brian Jackson, of the Harvard SRP Center, was awarded an NIH grant for high-end instrumentation, which will improve the center's analysis of biological samples. The new instrumentation will be used for human health and disease and drug delivery projects, among others.

Carini and Chorover Win NSF Grants

UArizona SRP Center researchers Paul Carini and Jon Chorover were awarded funding from the National Science Foundation (NSF). Carini received a Faculty Early Career Development grant to investigate the stability of genetic material in the natural environment, and Chorover received NSF funding to research the chemical composition of silicate material — a major component of rocks in the earth's crust — following rain and weathering events.

Hoffman Awarded EPA Grant to Study PFAS

Kate Hoffman, of the Duke University SRP Center, was awarded an Environmental Protection Agency (EPA) grant to study PFAS in homes. The study will analyze air and dust samples, as well as silicone wristband monitors that absorb organic chemicals, to determine PFAS exposures.

Researchers Recognized for Surfactant Sustainability

UArizona SRP researchers David Hogan and Maier won an NIEHS Small Business Innovation Research (SBIR) grant to develop non-toxic, biodegradable surfactants, which are compounds used to suppress dust emissions from mining operations. This technology will be an environmentally friendly tool to reduce air pollution and protect human health.

GlycoSurf, an SRP SBIR grantee founded by UArizona researchers, won the 2022 Utah Innovation Award for Sustainability. The company aims to replace typical mining surfactants with greener options while recovering rare earth minerals.

FUNDING OPPORTUNITIES

Research Enhancement Award Program for Health Professional and Graduate Schools

What: Support for small-scale research projects that will have a defined impact on environmental health sciences with a research focus on exposure-related responses from environmental agents.
Funder: NIEHS
When: Applications due **October 25**.

Incorporating Genetic Diversity into Toxicity Testing

What: SBIR grants to support development of resources and approaches that reflect the variability in human populations in chemical toxicity testing.
Funder: NIEHS
When: Applications due **November 8**.

Community-Led, Health Equity Structural Intervention Initiative

What: Support the development, implementation, assessment, and dissemination of community-led, health equity structural interventions to reduce health disparities in support of the goals of the Community Partnerships to Advance Science for Society program. For more details, read the full Research Opportunity Announcement.
Funder: NIH Common Fund
When: Letters of intent due **November 18**. NIH staff will hold technical assistance webinars on **October 4** and **October 11, 2-3 pm ET.**

Multi-Omics for Health and Disease

What: Research project cooperative agreements to establish Disease Study Sites that will be part of a collaborative initiative to advance the application of multi-omic technologies to study health

and disease in diverse populations.
Funder: NIEHS
When: Applications due **November 8**.

Notice of Special Interest: Research on Sex and Gender Influences

What: Administrative supplements to support research highlighting the impact of sex and/or gender influences in human health and illness.
Funder: NIH Office of Research on Women's Health
When: Applications due **January 26**.

Notice of Special Interest: Research on Women's Health in Understudied Populations

What: Administrative supplements to support research highlighting health inequities among women in the United States from understudied, underrepresented, and underreported populations in biomedical research.
Funder: NIH Office of Research on Women's Health
When: Applications due **February 1**.

INTERAGENCY NEWS

Updated PFAS Fact Sheets

The Interstate Technology Regulatory Council published updates to its PFAS fact sheets. This update includes a new Surface Water Quality fact sheet, along with new content added to existing documents.

Request for Information: PFAS

The U.S. Food and Drug Administration seeks scientific data and information on current food contact and packaging uses of fluorinated polyethylene, consumer dietary exposure that may result from those uses, and safety of certain PFAS that may migrate from fluorinated polyethylene food containers. Comments are due **October 18.**

DATA SCIENCE AND DATA SHARING

NIH DMS Policy: New Supplemental Information

NIH released two resources related to the Data Management and Sharing (DMS) policy. The supplemental information describes privacy protection for human research participants, as well as responsible management and sharing of American Indian/Alaska Native participant data.

NIH DMS Policy: Webinar Series

NIH hosted a two-part webinar series on the new DMS policy. Part One discussed the policy's scope, exclusions, and compliance, and Part Two discussed best practices for privacy protection. Webinar recordings and slide decks are available on the NIH Scientific Data Sharing webpage.

Data Curation Network Workshop

The NIH Office of Data Science Strategy is hosting a third Data Curation Network workshop to provide an overview of appraising and preparing research data to make it more findable, accessible, interoperable, and reusable (FAIR). Recordings from the first two workshops are available on the event series webpage. The virtual event will take place on **November 15**.

Northeastern University Shares Sequencing Datasets

Five datasets from Northeastern University were added to the Gene Expression Omnibus (GEO) repository. The datasets included trichloroethylene (TCE)-related gene expression changes in human immune-related responses, human placental cells and tissues, and rat placental tissue. One dataset also explored gene expression changes related to birth outcomes.

NIH Generalist Repository Webinar Series

The Generalist Repository Ecosystem Initiative (GREI) webinar series focuses on generalist repositories to learn about available repository resources and best practices for sharing NIH-funded research. The series will be presented by the generalist repositories: Dryad, Dataverse, Figshare, Mendeley Data, Open Science Framework, and Vivl. The next event in the NIH series is a panel discussion of the GREI repositories on **October 12**.

NIH Long COVID Computational Challenge

The NIH Long COVID Computational Challenge (L3C) seeks to spur and reward the development of AI/ML models to identify which patients infected with SARS-CoV-2 are likely to develop Long COVID. The prize will be up to $500,000 and submissions are due **December 15**.

Bridge to Artificial Intelligence Program

The NIH Common Fund launched the Bridge2AI program, which will be assembling team members from diverse disciplines and backgrounds to generate tools, resources, and richly detailed data that are responsive to AI approaches. Through extensive collaboration across projects, Bridge2AI researchers will create guidance and standards for the development of ethically sourced, state-of-the-art, AI-ready data sets that have the potential to help solve some of the most pressing challenges in human health.

Design Challenge for LitCoin Submission Platform

The LitCoin Pilot Design Challenge seeks to spur innovation by rewarding the most creative and effective plans to construct the LitCoin submission platform. This platform will enable researchers to generate high-quality knowledge and share it with the greater community. Submissions will be evaluated based on the extent of innovation, practical considerations of the design, and ease of assimilation. Applications are due **October 31**.

PHOTO OF THE MONTH

U.S. Vice President Kamala Harris (middle) visited the State University of New York at Buffalo, an SRP individual research grantee, to speak with students about climate change, water pollution, and renewable energy. The eight students pictured with Harris, from left to right, are Devon Gorbey, Sam Anderson (back), Mruganka Parasnis, Rebecca Dickman, VP Harris, Sydney Gallo, Amy Bentley, Srikrithi Krishnan, and Joel Muhigirwa. (Photo courtesy of Rebecca Dickman)