

Superfund Research Program *e-Posted Notes*

January 13, 2023 (Issue 228)

HEADLINES

KC Donnelly Externship Applications Due February 28

The [K.C. Donnelly Externship Award Supplements](#) provide current SRP trainees with translational and transdisciplinary opportunities to travel and collaborate with other SRP grantees, government laboratories, and state, local, or tribal agencies.

Interested applicants must submit a letter of intent to Brittany Trottier (brittany.trottier@nih.gov), copying your respective Program Officer and Center Director, by **January 20**. Full applications are due **February 28**. For more information about the application process, see the [NIH Notice of Special Interest](#).

2022 Wetterhahn Memorial Award Winner

Congratulations to [Amanda Armijo](#), recipient of the 25th annual [Karen Wetterhahn Memorial Award](#)! Armijo, a postdoctoral researcher mentored by John Essigmann at the Massachusetts Institute of Technology SRP Center, works to identify how exposure to the environmental contaminant N-Nitrosodimethylamine (NDMA) impacts DNA mutation patterns. Read more about Armijo's research in the [NIEHS Environmental Factor newsletter](#).

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:

- [Celebrating 35 years of innovative Superfund research to promote health](#): The 2022 SRP annual meeting, held December 14-17, highlighted ways to promote environmental justice and reduce health disparities.
- [GenX Exposure Study reports results back to the community](#): North Carolina State University SRP researchers found high levels of six different per- and polyfluoroalkyl substances (PFAS) in blood of North Carolinians.
- [Path to food safety requires multidisciplinary approach, experts say](#): Scientists supported by SRP are addressing the global problem of toxic heavy metals in food.
- [From research to innovation: technology transfer focus of roundtable](#): The Federal Remediation Technologies

EMPLOYMENT OPPORTUNITIES

Northeastern Hiring Atmospheric Engineering and Science Professors

The Department of Civil and Environmental Engineering at Northeastern University [seeks faculty candidates](#) for tenure-track appointments at the assistant, associate, or full professor levels across the broad field of atmospheric engineering and science. Successful candidates will develop independent research programs, teach courses at the graduate and undergraduate level, supervise students and post-doctoral associates, and participate in service to the university.

Staff Scientist Opening with NIEHS DTT

NIEHS has an opening for two [Staff Scientists](#) within the Division of Translational Toxicology (DTT) – developing, coordinating, and leading scientific and operational activities related to the characterization of hazardous substances.

NIEHS Seeks Genomics Researcher

The Genome Integrity and Structural Biology Laboratory within the Division of Intramural Research of NIEHS is recruiting a [Tenure-Track Investigator](#) in the area of genomic maintenance, DNA replication, DNA repair, and/or DNA recombination. The successful candidate is expected to lead an innovative, independent research program

Roundtable, held November 8, brought together leaders from 10 federal agencies to discuss the future of hazardous waste cleanup and prioritized technology transfer, training, and innovation.

- [Extramural Papers of the Month: Bacteria that degrade PCBs in sediment can reduce chemical emissions to surrounding air](#): Adding bacteria that can break down polychlorinated biphenyls (PCBs) to contaminated sediments reduced the release of the chemicals into surrounding air, according to University of Iowa SRP researchers.
- [2022 Papers of the Year: Tropical cyclones linked to rise in U.S. deaths](#): Over the last three decades, tropical cyclones in the U.S. were associated with higher death rates in subsequent months, according to a study funded partly by SRP.
- [2022 Papers of the Year: Silicone wristbands highlight chemical exposures following Hurricane Harvey](#): An Oregon State University SRP study was the first to reveal higher personal chemical exposures immediately following Hurricane Harvey.
- [2022 Papers of the Year: Pine needles work as passive samplers for PFAS](#): SRP-funded researchers showed that pine needles can be used as a tool to monitor the presence and distribution of PFAS over time.

Visit the [SRP page](#) for more stories about the program.

Schaider Talks Exposures and Health Effects

Laurel Schaider, project leader at the University of Rhode Island (URI) SRP Center, was interviewed in a [Provincetown Independent article](#) about recent discoveries of PFAS in private wells in Wellfleet, Massachusetts. The [Living on Earth NPR podcast](#) also featured Schaider for a segment on the health effects of PFAS.

Schaider spoke as a panelist for a [November 2022 film screening](#) in Watertown, Massachusetts, on how toxic chemicals in the environment may cause cancer.

Horney Quoted on Climate Change

Jennifer Horney, of the Texas A&M University (TAMU) SRP Center, was quoted in an [AP News article](#) about the mental health impacts of natural disasters like Hurricane Ian. Horney was also cited in an [AccuWeather article](#) about increases in post-traumatic stress disorder and suicide rates among victims of natural disasters and how climate change is a contributing factor.

TRAINEE SPOTLIGHT

Addressing EPFRs to Improve Human Health

This month we spoke with Avinash Kumar, a postdoctoral trainee at the Louisiana State University (LSU) SRP Center mentored by Stephania Cormier.

exploring the mechanisms of genome integrity.

NYU Seeking Clinical Assistant Professor

The School of Global Public Health at New York University is seeking applications for a [clinical assistant professor](#) position within the Department of Social and Behavioral Sciences (SBS). The candidate will teach departmental courses including risk communication, disaster and health courses, and core SBS courses; serve on committees and mentor students; and build an independent research portfolio.

CURRENT RESEARCH BRIEF

[SRP Research Brief 337](#): Dioxin Disrupts Liver Cells in Mice, Potential Link with Liver Disease (Rance Nault & Tim Zacharewski, Michigan State University)

Past [Research Briefs](#) are available on the SRP website. To receive the monthly Research Briefs or to submit ideas, email Brittany Trottier (brittany.trottier@nih.gov).

EVENTS

[American Association for the Advancement of Science 2023 Annual Meeting](#)

March 2-5, 2023

Washington, D.C. and Virtual

[Society of Toxicology 2023 Annual Meeting](#)

March 19-23, 2023

Nashville, Tennessee

[Interstate Technology Regulatory Council Annual Meeting](#)

March 20-23, 2023

Boston, Massachusetts

[Toxicology and Risk Assessment Conference](#)

April 24-27, 2023

Miamisburg, Ohio

[National Brownfields Training](#)



What is the focus of your research at the LSU SRP Center?

We study how environmentally persistent free radicals (EPFRs) are formed, how to destroy them, and how inhaling them impacts the lungs and heart, with the ultimate goal of protecting communities and the environment. EPFRs are contaminants formed by burning hazardous waste and are not easily removed from the environment.

How did you become interested in this work?

Growing up and spending more than 20 years of my life in Sonebhadra, India, a rural area with a surface coal mine, I witnessed the environmental and health damages of coal burning first-hand. This motivated me to pursue a Ph.D. in Environmental Toxicology and continue my current training in Dr. Cormier's lab, where I also interact with the community in Colfax, Louisiana, whose air quality is influenced by an open-burn hazardous waste treatment facility.

Tell us about a recent award and what it means to you.

Receiving the [K.C. Donnelly Externship Award](#) from SRP, as well as the Dr. Dharm Singh Postdoctoral Fellow [Best Abstract Award](#) from the Society of Toxicology, means a lot to my research. These prestigious awards have provided me with recognition among peers and motivated me to further my knowledge and contributions to the field of environmental toxicology.

What factors have contributed most to your growth as a researcher throughout your time as an SRP trainee?

In addition to a self-driven attitude and passion for my research, the extraordinary mentorship of my supervisor, Dr. Cormier, has been essential to my growth as an SRP trainee. The highly collaborative environment at the LSU SRP Center, weekly participation in SRP seminars, involvement in environmental health literacy programs, and networking with other scientists working on interdisciplinary projects have all been major contributing factors to my personal growth as a researcher.

What is one piece of advice that you have for other SRP trainees?

Network and collaborate with scientists outside of your area of expertise. Stay motivated — patience is key and will help you accomplish each goal step by step.

[Conference](#)

August 8-11, 2022

Detroit, Michigan

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.

HOT PUBLICATION

Measuring PFAS in Fish Tissue

Researchers from the University of Rhode Island (URI) SRP Center [identified and quantified PFAS](#) in fish. The team aimed to better understand the ability of the chemicals to build up, or

bioaccumulate, in freshwater fish to inform fish consumption advisories and decrease human exposure.

PFAS are a large group of human-made chemicals associated with many adverse health effects. PFAS parent compounds, or precursors, can degrade into terminal PFAS, which do not break down further under normal environmental conditions. In this study, researchers investigated precursors of perfluoroalkyl acids (PFAA), which have been widely found in commercial products and environmental samples, such as fish.

The URI scientists used a toolbox of analytical and statistical methods to detect and measure 37 PFAS and their precursors in fish tissue samples from nine freshwater ecosystems in New Hampshire. They also screened for the presence of other precursors in fish muscle tissue.

The researchers found perfluorobutane sulfonamide (FBSA), a PFAA precursor, in all fish samples. They also found perfluorooctane sulfonate (PFOS) — a highly bioaccumulative PFAS that was phased out in 2002 — in most fish samples at high levels. Specifically, all but two fish samples analyzed PFOS levels exceeding the daily recommended consumption limit for adults and about a fifth of samples exceeded the weekly consumption limit.

The authors note that fish consumption advisories are primarily developed for PFOS, but their work indicates that regulatory efforts should consider additional bioaccumulative PFAS, including PFAA precursors like FBSA.

AWARD WINNERS

University of Iowa Trainees Awarded

Neha Paranjape received the [North American Graduate Fellowship](#) at the American College of Toxicology Annual Meeting, where she presented her research on the impact of organic pollutants on cognitive development.

Amanda Bullert won a [Dare to Discover Award](#) from the University of Iowa for her research on the impacts of polychlorinated biphenyls on the adolescent brain.

Morello-Frosch Wins Best Paper Award

Rachel Morello-Frosch, of the University of California, Berkeley, SRP Center, [co-authored a paper](#) that won second place in the Environmental Science category of the [Environmental Science & Technology \(ES&T\) Best Paper Awards](#).

URI Researchers Recognized for Addressing PFAS

Researchers from the URI SRP Center collaborated on the paper [Addressing Urgent Questions for PFAS in the 21st Century](#), which won second place in the Feature/Perspective/Viewpoint category of the [ES&T Best Paper Awards](#).

Trainee Matthew Dunn won the [Buck Ketchum Prize](#) for Best Graduate Student Talk at the New England Estuarine Research

Society Conference. Dunn works to validate the use of passive samplers to detect PFAS in groundwater and surface waters.

Former PROTECT Trainees Win Fellowships

Max Aung and Stephanie Eick, former trainees at the Northeastern University Puerto Rico Testsite for Exploring Contamination Threats (PROTECT) SRP Center, were awarded [Harvard JPB Environmental Health Fellowships](#). Aung's work focuses on how environmental factors influence developmental health across the life course, and Eick's work focuses on how non-chemical stressors can intensify the harmful effects of chemicals.

Alvarez Wins P3 Award

Pedro Alvarez, of the Baylor College of Medicine SRP Center, won the [Partners in Progress and Prosperity \(P3\) Award](#) from the American Chemical Society for his work on remediation of water used in oil and gas production.

UNC SRP Awarded for Science Education

Dana Haine, of the University of North Carolina at Chapel Hill (UNC) SRP Center, received the [2022 Non-School Setting Distinguished Service Award](#) from the North Carolina Science Teachers Association (NCSTA). This award is given to an educator who exhibits leadership and contributes to improvements in science education.

UNC SRP teacher consultant Monica Strada received the NCSTA [Outstanding Science Teacher Award](#) for creative and innovative science teaching.

FUNDING OPPORTUNITIES

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](#).

Community Partnerships to Advance Science for Society Coordination Center

What: Cooperative agreement to develop a [Community Partnerships to Advance Science for Society](#) (ComPASS) Coordination Center to provide administration, coordination, data, and research capacity-building and training support to the ComPASS consortium.

Funder: NIH Common Fund

When: [Applications due January 27](#).

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 January 31](#).

Accelerating the Pace of Children's Health Research

What: Research project grants to analyze data from the [Adolescent Brain Cognitive Development Study](#) to increase knowledge of adolescent health and development.

Funder: NIH

When: [Applications due February 5](#).

Research to Action: Community Exposures to Environmental Contaminants

What: Multidisciplinary projects to investigate the potential health risks of environmental exposures of concern to a community and to develop and implement a public health action plan based on research findings.

Funder: NIH

When: [Applications due February 5](#).

Using Telomere Status to Reveal Molecular Mechanisms Underlying Environmental Exposure Susceptibility

What: Research project grants to examine and characterize molecular underpinnings surrounding telomere status and accompanying biological pathways in response to environmental exposures.

Funder: NIEHS

When: [Applications due February 14](#).

Notice of Special Interest (NOSI): Administrative Supplements to Recognize Excellence in Diversity, Equity, Inclusion, and Accessibility (DEIA) Mentorship

What: Administrative supplements to existing NIH awards to support scientists who have demonstrated compelling commitments and contributions to mentorship and enhancing DEIA in the biomedical sciences.

Funder: NIEHS

When: [Applications due February 17](#).

Environmental Exposures Impact Risk for Psychiatric Disorders

What: Research linking environmental exposures to psychiatric outcomes by supporting studies that seek to understand the underlying biology of these relationships.

Funder: NIEHS

When: [Applications due February 22](#).

INTERAGENCY NEWS

ITRC Annual Meeting: March 20-23, 2023

The Interstate Technology Regulatory Council (ITRC) is [hosting its annual meeting](#) March 20-23, 2023, in Boston. This in-person

event will bring together environmental leaders and professionals from state and federal agencies, Tribes, industry, and non-governmental organizations to work together in the development of consensus-based environmental guidance. In addition to the meeting, ITRC will also host a state-specific PFAS training on **March 24**.

Toxicology and Risk Assessment Conference: April 24-27, 2023

The [2023 Toxicology and Risk Assessment Conference](#), hosted **April 24-27, 2023**, in **Miamisburg, Ohio**, by the U.S. Centers for Disease Control and Prevention, will focus on current research, methodologic, and practice issues that are the focus of toxicology and risk assessment efforts in various federal agencies, academic institutions, and industries. A detailed agenda, and conference venue and registration information, are forthcoming. The poster abstract deadline is **February 1**.

National Brownfields Training Conference: August 8-11, 2023

The [National Brownfields Training Conference](#) is the largest event in the nation focused on environmental revitalization and economic redevelopment. Usually held every two years, the conference attracts over 2,000 stakeholders in brownfields redevelopment and cleanup to share knowledge about sustainable reuse and celebrate the success of the U.S. Environmental Protection Agency's Brownfields Program. The upcoming conference will be held **August 8-11, 2023**, in **Detroit**.

DATA SCIENCE AND DATA SHARING

PCB Datasets from University of Iowa

The University of Iowa released four new datasets from their studies on PCBs. The first describes [PCB congener accumulation](#) on passive samplers from [their study](#) assessing the effect of bioaugmentation on reducing PCB emissions from contaminated sediment.

Another dataset contains [PCB and hydroxylated PCB \(OH-PCB\) measurements](#) in postmortem human brain tissues from [their study](#) investigating age-, sex-, and brain region-specific distribution of PCBs.

They shared the [R workspaces, R scripts, and example data](#) from [their study](#) using machine learning to identify OH-PCBs in animal samples. They also released [GC-MS/MS data](#) for a mixture containing three non-Aroclor PCB congeners detected in polymer resin from kitchen cabinets.

HL7 Releases FHIR for FAIR Implementation Guide

Health Level Seven (HL7) released a new [implementation guide](#) on Fast Healthcare Interoperability Resources (FHIR) for Findable, Accessible, Interoperable, and Reusable (FAIR) scientific data. The guide is intended to help researchers, health data providers, technical implementers, government agencies,

and the public facilitate the collaboration between the FAIR and the FHIR communities, enable a cooperative usage of the FHIR standard and FAIR principles, and support the assessment and implementation of FAIR health data by using HL7 FHIR.

PHOTO OF THE MONTH



Duke University SRP trainees participated in a workshop on incorporating storytelling and narrative components when communicating scientific research. The workshop was led by Bryan Luukinen, former Duke SRP Research Translation and Community Engagement Core staff member. (Photo courtesy of Duke University SRP Center)