

Superfund Research Program *e-Posted Notes*

August 5, 2022 (Issue 223)

HEADLINES

SRP Annual Meeting Abstracts Due September 15

The abstract submission portal for the [SRP Annual Meeting](#) is now open. Submission deadlines for oral and poster presentations are **August 31** and **September 15**, respectively. Submit your abstracts on the [Annual Meeting webpage](#).

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

Trainee Podcasts

We are now highlighting podcasts on the SRP [Trainee Videos and Podcasts](#) webpage. If you are a trainee and have developed a podcast you would like to see on the webpage, please ask your principal investigator or Training Core lead to submit it to the [Data Collection Tool](#).

A Lasting Legacy in Science and Mentorship

The latest SRP [Public Health Impact Story](#) features past winners of the [Karen Wetterhahn Memorial Award](#), named in honor of a former chemist and SRP grantee who was renowned for her scientific excellence and mentorship. Wetterhahn died 25 years ago this year.

Summer Scientific Short Video Challenge

Show off your research and creativity in the SRP Scientific Short Video Challenge. Consider filming a “day in the lab” video or creating a music video about your research area — the possibilities are endless.

Videos must be recorded on a cell phone, last no longer than 3 minutes, and be uploaded to an online video platform such as YouTube, Vimeo, or TikTok. Submit to SRPInfo@mail.nih.gov with the subject line *SRP Summer Scientific Short Video Challenge*, copy your SRP-funded mentor, and include your position and center.

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:

EMPLOYMENT OPPORTUNITIES

Policy Campaign Director Opening at Moving Forward Network

Moving Forward Network (MFN), housed within the Urban and Environmental Policy Institute at Occidental College, is seeking a Policy Campaign Director. MFN is a national coalition of over 50 community-based groups and organizations; the role entails developing and directing campaigns in partnership with the MFN project director while working with MFN members and organizations. Interested applicants should submit their resume and cover letter to resumes@oxy.edu.

University of Minnesota Seeking Professor

University of Minnesota's School of Public Health is seeking 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, have the ability to develop an independent research program, develop and teach courses, mentor graduate students, participate in outreach and service, and contribute collaboratively to multidisciplinary efforts as part of their scholarly work.

Open Director Position at NCSU

The Center for Human Health and the Environment at NCSU is [hiring a new director](#). The successful candidate will report directly to NCSU's Vice Chancellor for

- [Superfund Research Program boosts innovation, outreach, and training](#): This year marks the 35th anniversary of the NIEHS SRP, and there is much to celebrate with that milestone. Since the late 1980s, the program has supported solutions-focused research into environmental exposures.
- [Toxic agents can target mitochondria, influence disease, expert says](#): Duke University Associate Professor Joel Meyer discussed his research into how early-life mitochondrial toxicity can affect later-life health during the NIEHS Keystone Science Lecture.
- [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.

Visit the SRP page for more stories about the program.

Knappe Recognized for PFAS Research

Detlef Knappe, of the North Carolina State University (NCSC) SRP Center, was [recognized by the City of Wilmington](#) for his work on discovering and tracing per- and polyfluoroalkyl substances (PFAS) in the Cape Fear River basin in eastern North Carolina. The city recognized the valuable contributions of scientists in finding and removing PFAS from the river, which supplies water to 500,000 people in southeastern North Carolina.

Coronell Interviewed in Chemistry World

Orlando Coronell, project leader at the University of North Carolina at Chapel Hill (UNC) SRP Center, was interviewed by [Chemistry World](#) magazine about new membranes used to generate energy from differences in salt concentrations in estuaries. The technology is currently under development in China and shows promise as a source of electricity generation.

Berkeley Researchers Talk Water, Environmental Justice

Clare Pace, a trainee at the University of California, Berkeley SRP Center, was featured in a [Tap Talk podcast](#). She discussed issues related to private well data, safe water access, environmental justice, and community outreach.

Rachel Morello-Frosch, the Community Engagement Core lead at the center, was [quoted in an article](#) about alternative approaches to cap-and-trade programs, which are one strategy for reducing greenhouse gas emissions. Morello-Frosch was also featured in a [Washington Post article](#) about how a discriminatory process called redlining has led to disparities in environmental exposures and health in certain communities.

Sunderland Quoted on PFAS Spread

Elsie Sunderland, of the University of Rhode Island SRP Center, was quoted in the [Chicago Tribune](#) about PFAS found in drinking water in Lake Michigan and throughout Illinois. Sunderland was also quoted in the [Colorado Sun](#) about the health implications of spreading biosolids that contain PFAS on farms.

Research and Innovation and is expected to lead an externally funded nationally and internationally recognized research program that advances interdisciplinary environmental health science research.

NIEHS Seeks Staff Scientist

The Epidemiology Branch within NIEHS' Division of Intramural Research is recruiting a [Title 42 \(g\) staff scientist](#) to join the Social and Environmental Determinants of Health Equity Group led by Chandra Jackson. The successful candidate will contribute to research projects related to physical and social environments, sleep, and cardiometabolic health outcomes.

Two Open Positions at the University of Florida

The Department of Environmental and Global Health in the College of Public Health and Health Professions at the University of Florida is recruiting a [tenure-track faculty member](#). The successful candidate will be engaged in researching the health consequences of exposure to multiple stressors — environmental and social — on vulnerable populations.

The University of Florida is also [seeking a new director](#) for the Center for Environmental & Human Toxicology. This is a 12-month, state-funded, tenure-track faculty position.

CURRENT RESEARCH BRIEF

[SRP Research Brief 332](#): Improving How Microbes Break Down PFAS (Yujie Men, University of California-Riverside)

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).

Hovarth Talks Toxins at TEDx

Courtney Kozul Hovarth, a former SRP-funded trainee at Dartmouth College and Wetterhahn award winner, was featured in a [TEDx talk](#) about the need for safe and accessible medicines for children with cancer. Hovarth shared personal experiences about her son's cancer treatment and toxic side effects.

TRAINEE SPOTLIGHT

Mills Talks Membranes and Mentorship

This month we spoke with Rollie Mills, a graduate student mentored by Dibakar Bhattacharyya (DB) at the University of Kentucky (UK) SRP Center.



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

My research focuses on the development of novel membrane materials to capture and degrade harmful pollutants to clean up water and air.

How did you become interested in this work?

I have been interested in water since I was young. Living in a remote village in Greece, where resources like fresh water were not always guaranteed, taught me the importance of having clean and drinkable water sources. As an undergraduate student at UK, I met my mentor DB, and his passion for helping others further drew me into environmental remediation research.

Tell us about your [recent publication](#) on antiviral membranes to deactivate SARS-CoV-2.

We worked with other departments at UK to coat our commercial membranes with a non-toxic enzyme, which neutralized the spike protein of SARS-CoV-2 — the primary protein in charge of infecting host cells with COVID-19 — within seconds. This research shows that there are new avenues to pursue for personal protective equipment and masks. Moving such technology forward can significantly decrease the rate of viral infection and economic damage that harms our society during pandemics.

Tell us about an award that meant a lot to you.

I won first place in the poster competition at the [2022 North American Membrane Society conference](#). This showed me how far I have come as a researcher. It feels like just yesterday that I was standing in the audience trying to grasp at any information I could comprehend. Now, at this conference, I was able to talk with professors I have looked up to for years, and I am looking forward to where my research will take me.

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

Surround yourself with fantastic peers. Having motivated and inspiring researchers around me is what pushed me to become the scientist I am today. I have also learned a lot from the undergraduate students in our lab, including Ronald Vogler,

EVENTS

[Accelerating Precision](#)

[Environmental Health:](#)

[Demonstrating the Value of the Exposome](#)

August 5, 12, 19, & 26, 2022

Virtual

[8th UMD Environmental Justice and Health Disparities Symposium](#)

August 11-13, 2022

College Park, Maryland

[Environmental Justice Boot Camp:](#)

[Theory and Methods to Study](#)

[Environmental Health Disparities](#)

August 15-16, 2022

Virtual

[Brownfields 2022 Conference](#)

August 16-19, 2022

Oklahoma City, Oklahoma

[13th International Particle](#)

[Toxicology Conference](#)

August 28-31, 2022

Santa Fe, New Mexico

[19th International Conference of the](#)

[Pacific Basin Consortium for](#)

[Environment and Health](#)

August 29-September 1, 2022

Jeju, South Korea

[National Tribal & Indigenous Climate](#)

[Conference](#)

August 29-September 1, 2022

St. Paul, Minnesota, and Virtual

[SETAC Asia-Pacific Conference](#)

[2022](#)

September 5-8, 2022

Singapore

[Annual Conference of the](#)

[International Society for](#)

[Environmental Epidemiology](#)

September 18-21, 2022

Athens, Greece

[International Society of Exposure](#)

[Science Annual Meeting: From](#)

[Exposure to Human Health – New](#)

[Developments and Challenges in a](#)

[Changing Environment](#)

September 25-29, 2022

Lisbon, Portugal

[Elana Elkin's Wetterhahn Lecture:](#)

[Molecular Placental Responses to](#)

Jacob Concolino, and Matthew Bernard. Also, keep an open mind about your mentors — they can come from anywhere! Along with DB, one of the most influential mentors I have had is Kevin Baldrige, a former postdoctoral researcher in my lab.

HOT PUBLICATION

Combining Data Mining and Cell Studies to Better Evaluate Chemical Mixtures

Researchers at the UNC SRP Center have [demonstrated an innovative method](#) for identifying components of chemical mixtures and health outcomes associated with exposures. Combining a data-driven approach with cell-based studies allowed the team to determine chemical combinations that are potentially harmful.

Humans regularly encounter an enormous number of chemical combinations in consumer products, food, and water. Because it is not feasible to test the toxicity of all possible combinations through lab experiments, the authors employed computer-based data-mining techniques to characterize frequently co-occurring chemicals that could then be further evaluated in the lab.

Using chemical exposure information from a publicly available database, the research team analyzed and identified chemicals that frequently appear in the household environment. They homed in on chemical mixtures that affect PPAR γ , a well-studied protein involved in liver metabolism. Increases in PPAR γ activity can alter expression of genes critical to insulin regulation.

The researchers assessed the effects of five understudied chemicals on liver cells. They tested the chemicals in vitro for changes in the expression of insulin-related genes. Individual exposure to each chemical yielded little to no effect on cell health. When the chemicals were combined, however, insulin-related gene expression significantly increased.

According to the authors, these findings suggest that exposure to chemical mixtures may intensify biological changes in the liver, compared to single-chemical exposures.

AWARD WINNERS

TAMU Researchers Recognized

Galen Newman, of the Texas A&M University (TAMU) SRP Center, was awarded the 2022 Environmental Design and Research Association's [Certificate of Research Excellence](#). Dongying Li, also of the center, received a Disaster-Related Mental Health Award from the National Academies' [Gulf Research Program](#). Li and Newman help communities prepare for and recover from disasters by [fostering urban resilience](#) and sharing ways to cope with [post-hurricane mental distress](#).

Baker Highlighted for Scientific Contributions

Erin Baker, of the TAMU and NCSU SRP Centers, was awarded the [Georges Guiochon Faculty Fellowship](#) for her use of multiple

[Trichloroethylene Exposure](#)

October 6, 2022

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

[SRP Annual Meeting](#)

December 14-16, 2022

Raleigh, North Carolina, 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

separation methods, such as liquid chromatography and mass spectrometry, to evaluate molecules in biological systems. She also received the 2022 [Biemann Medal](#) for her significant contributions to the development and application of ion mobility spectrometry technologies, which are used to separate and identify molecules in the gas phase.

SRP Trainees Stand Out

Fenna Sille and Carsten Prasse, trainee alumni from the University of California, Berkeley SRP Center, received [Johns Hopkins Discovery Awards](#) for their research on exploring the use of artificial intelligence to assess the exposome, a measure of all the exposures an individual faces throughout their life. Bridget Belcher, a trainee at the center, won the Chemistry Instructional Achievement Award from the University's College of Chemistry for her performance as a graduate student instructor.

Francisco Léniz, a graduate student trainee at the UK SRP Center, received the Tau Beta Pi KY-A Most Outstanding Graduate Student Award, which recognizes engineering graduate students within the university.

Asta Habtemichael, a University of Rhode Island SRP Center trainee, was awarded the 2022 [Switzer Environmental Fellowship](#) to support his graduate studies, career development, and personal leadership skills toward advancing social equity.

Trainees Place in Poster Presentations

TAMU postdoctoral trainee Meichen Wang won second place at the College of Veterinary Medicine and Biomedical Sciences Trainee Research Symposium for her poster presentation on [edible clays](#) used for adsorption and detoxification of harmful chemicals.

Christopher Brunet, a trainee at the University of Iowa SRP Center, was recognized in the Civil and Environmental Engineering category for a poster he presented at the University's College of Engineering Research Open House. David Ramotowski, also a trainee at the center, won a Social Justice Award for his poster at the open house.

Thorne Named Distinguished Chair

Peter Thorne, of the University of Iowa SRP Center, was named a [University of Iowa Distinguished Chair](#). Thorne's pioneering research describes environmental risk factors for inflammatory lung diseases, the toxicity of persistent chemical pollutants, and the health effects of climate change.

Rhode Island SRP Wins Best Paper

Researchers from the University of Rhode Island SRP Center won a [Best Paper of the Year Award](#) from the International Society of Exposure Science. Their work focused on identifying and [characterizing PFAS](#) in fire stations.

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

Climate Change and Health Community of Practice Coordinating Center

What: Research Coordinating Center to support the development of an NIH Climate Change (CCH) community of practice to manage and support current CCH research and capacity-building efforts.

Funder: NIH-wide [CCH Initiative](#)

When: A letter of intent was due **July 25**. [Applications due August 25](#).

Technologies for Research on Climate Change and Human Health

What: Small Business Innovation Research grants to develop tools to capture the effects of climate change and the associated impacts of extreme weather events on human health and to support adaptation strategies to minimize impacts from climate change.

Funder: NIH-wide [CCH Initiative](#)

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

National Aquatic Resource Surveys Data Analysis Innovation Challenge

What: Use data from the National Aquatic Resource Survey to address questions relating to national priorities, including climate change, environmental justice, nutrient management, and other water quality topics.

Funder: U.S. Environmental Protection Agency Office of Water

When: [Applications due September 30](#).

Accelerate Children's Environmental Health Research

What: Analyze existing data from the Adolescent Brain Cognitive Development Study to examine the influence of environmental exposures on children's brains and development, and identify protective factors to mitigate environmentally induced changes.

Funder: NIEHS

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

Research Enhancement Award Program for Health Professional and Graduate Schools

What: Support for small-scale research projects focused on exposure-related responses from environmental agents that will have a defined impact on environmental health sciences.

Funder: NIEHS

When: [Applications due October 25](#).

Incorporating Genetic Diversity into Toxicity Testing

What: Research grants to support chemical toxicity testing that reflects the genetic variability in human populations.

Funder: NIEHS

When: [Applications due November 8](#).

INTERAGENCY NEWS

Request for Information: PFAS

Federal agencies are requesting input related to PFAS:

- The U.S. Office of Science and Technology Policy requests comments to identify data gaps in research and development regarding several aspects of PFAS to inform a strategic plan for federal coordination for studying and managing the chemicals. [Comments are due August 29.](#)
- 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.](#)

Request for Information: NIH Common Fund Programs

NIH is requesting ideas for new [Common Fund programs](#) to be supported in fiscal year 2025 or beyond. Idea submissions are encouraged to be trans-NIH, require a coordinated effort among many investigators, have specific goals and deliverables, and describe an important opportunity or challenge in biomedical research today. Enter your responses on the [submission website!](#)

DATA SCIENCE AND DATA SHARING

Iowa SRP Shares PCB Datasets

Researchers at the University of Iowa SRP Center published a [dataset](#) describing the genetic information of a microbial community in sediments contaminated with polychlorinated biphenyls (PCBs). Microbial [DNA and RNA libraries](#) are also available for download.

Another Iowa [dataset](#) includes PCB sulfate concentrations — metabolites that indicate exposure to PCBs — from human blood samples. The data were used to [examine PCB sulfates](#) in mothers and children in urban and rural U.S. communities.

Machine Learning to Uncover Exposures

TAMU and NCSU SRP researchers used [machine learning](#), coupled with other analytical techniques, to uncover potential xenobiotics — substances foreign to the body — from metabolite data. They examined chemicals of known toxicity — including PFAS, PCBs, and pesticides — and uncovered many unknown potential features impacting toxicity. The researchers highlighted the importance of nontargeted studies to detect new molecules.

Human Health Exposure Analysis Resource (HHEAR)

[HHEAR](#) provides health researchers free access to laboratory and data analysis services to expand environmental exposure assessments within existing NIH-funded studies. SRP grantees may be eligible for free analysis of biological and environmental samples from HHEAR labs. [Applications](#) are due **August 12** to be considered for this round.

Data Sharing and Reuse Seminar Series

The August Data Sharing and Reuse Seminar will be held on

August 12. Details will be announced on the [seminar's webpage](#).

A Conversation with NIH: New Data Management and Sharing Policy

NIH is hosting a 2-part [webinar series](#) focused on the new NIH Data Management and Sharing (DMS) Policy. Seminars will be held **August 11** and **September 22**.

PHOTO OF THE MONTH



Karletta Chief (middle), of the University of Arizona SRP Center, spoke with Al Gore (left) and Elena Krieger (right) at the [Climate Reality](#) conference in Las Vegas, Nevada. Chief's conversation focused on Indigenous-led climate solutions, data sovereignty, and Indigenous resilience. Climate Reality gives individuals the tools, knowledge, and networks to mobilize communities and drive action to address climate change. (Photo courtesy of Karletta Chief).