

# Superfund Research Program *e-Posted Notes*

July 8, 2022 (Issue 222)

## HEADLINES

### Wetterhahn Memorial Award Applications Due August 3

SRP is currently accepting applications for the annual [Karen Wetterhahn Memorial Award](#). The award was established to recognize an outstanding graduate student or postdoctoral trainee that best demonstrates the qualities of scientific excellence exhibited by Karen Wetterhahn, who died in 1997. The award is open to all SRP trainees who are funded directly by an SRP grant (P42 or R01) or who are conducting research or activities funded by an SRP grant. The winner will be announced and will present their work at the SRP Annual Meeting in December.

Visit the [Wetterhahn webpage](#) for guidelines and information on how to apply. The application deadline is **August 3**. Please contact Danielle Carlin ([danielle.carlin@nih.gov](mailto:danielle.carlin@nih.gov)) if you have questions.

### SRP COVID-19 Activities Webpage

We recently updated the SRP [Special COVID-19 Supplements and Activities](#) webpage, which features research projects, community engagement and outreach activities, novel technology development, and publications related to COVID-19. If you are conducting relevant activities or have publications to list on the website, send your suggestions to [SRPinfo@mail.nih.gov](mailto:SRPinfo@mail.nih.gov).

### SRP Science Digest Features Sustainable Cleanup Research

The most recent SRP [Science Digest](#) is live! This issue highlights SRP individual research projects combining materials science and engineering approaches that use bacteria, plants, and fungi to clean up the environment. In this newsletter, you can learn more about sustainable projects designed to protect health.

### HHEAR Applications Due August 12

Applications to utilize the [Human Health Exposure Analysis Resource](#) (HHEAR) are due **August 12!** HHEAR provides health researchers free access to laboratory and data analysis services to expand environmental exposure assessments within their existing NIH-funded studies. If you have any questions about the HHEAR program, please contact Michelle Heacock ([heacockm@niehs.nih.gov](mailto:heacockm@niehs.nih.gov)).

## EMPLOYMENT OPPORTUNITIES

### 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 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 research on understanding the health consequences of exposure to multiple stressors — environmental and social — on vulnerable populations.

## 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:

- [North Carolina Fish Forum Turns Research Collaboration into Action](#): Researchers across three SRP-funded universities and their stakeholders organized the North Carolina Fish Forum in 2019. Three years later, the collaborators continue to reveal new insight into contaminants in fish, inform more health-protective advisories, and communicate risks to diverse groups.
- [Antiviral Membranes Boost Masks' Ability to Stop COVID](#): By combining nanotechnology with antiviral substances, SRP researchers have developed new synthetic membranes that can deactivate the SARS-CoV-2 virus responsible for the COVID-19 pandemic.
- [PFAS Conference Supported by NIEHS Engages Key Stakeholders](#): Per- and polyfluoroalkyl substances (PFAS) were front and center during the 3rd National PFAS Meeting. Scientists, community members, and policymakers shared research and, in some cases, emotional stories about the chemicals.

Visit the SRP page for more stories about the program:

- [SRP Centers Deliver Data Science Trainings](#): SRP grantees developed publicly available courses to help their trainees and the broader environmental health sciences research community develop data science skills.

### SRP Researchers Call for PFAS Action

Jamie DeWitt and Detlef Knappe of the North Carolina State University (NC State) SRP Center were interviewed by [WRAL](#) and [EuroNews](#) about their work on PFAS in North Carolina's Cape Fear River.

Philippe Grandjean of the University of Rhode Island (URI) SRP Center highlighted the [toxic impacts of PFAS](#) on children's immune systems. Rainer Lohmann, who leads the center, also noted the high potential for worker exposure to PFAS from [widespread industrial uses](#).

### Gray Improves Risk Communication

Kathleen Gray of the University of North Carolina at Chapel Hill (UNC) SRP Center was featured in an NIEHS [Grantee Highlight](#). In the piece, Gray described her community-engaged work to understand environmental concerns about [maternal and child health](#) as well as efforts to improve [environmental health literacy](#).

### Arizona Partners with Native Communities

Karletta Chief, University of Arizona SRP Center Community Engagement Core lead, [shared her experiences](#) growing up in the Navajo Nation and encountering environmental degradation. Now, as director of the University's Indigenous Resilience Center,

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

### Postdoctoral Researcher Sought by UC Riverside

The Department of Chemical and Environmental Engineering at UC Riverside is looking for a postdoctoral researcher to join the Microbe-Environment Nexus research group, led by Yujie Men. The successful candidate will be working on projects related to biodefluorination and will help investigate a bioelectrochemical system. Interested applicants should email their resumes to Men at [y-men@engr.ucr.edu](mailto:y-men@engr.ucr.edu).

## CURRENT RESEARCH BRIEF

[SRP Research Brief 331](#): Emerging PFAS Can Cause Changes in Gene Expression and Lipid Accumulation in Human Liver Cells (Angela Slitt, University of Rhode Island)

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](mailto:sara.amolegbe@nih.gov)).

## EVENTS

### [Exposome Symposium](#)

July 12-13, 2022  
New York, New York

### [Translation of Exposomics to Precision Medicine and Precision Nutrition](#)

July 25, 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

she partners with Indigenous communities to address environmental challenges and water insecurities facing tribes.

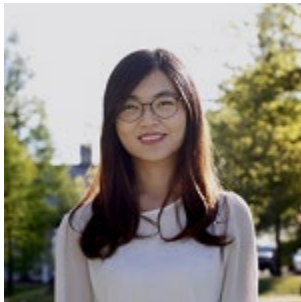
## Von Stackelberg Talks PFAS

Harvard SRP Center researcher Katherine von Stackelberg was interviewed by [Harvard Catalyst](#) about her research on PFAS and immunity. Von Stackelberg leads the Harvard SRP Center's research translation efforts.

## TRAINEE SPOTLIGHT

### Communication and Community Engagement to Combat Pollution

This month we spoke with Chuqi Guo, a trainee at the Louisiana State University (LSU) SRP Center. Guo is a postdoctoral researcher mentored by Jennifer Richmond-Bryant studying [community exposure to environmentally persistent free radicals](#) (EPFRs), which are long-lived toxic compounds formed from burning hazardous waste.



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

I work on a community-engaged project in Colfax, Louisiana, which hosts a commercial open burn and open detonation facility that uses thermal treatment to destroy hazardous wastes. We study community exposure by measuring particulate matter in the ambient air and analyzing the samples for EPFRs, metals, dioxins, and other pollutants.

#### ***How did you become interested in this work?***

According to the "Father of Environmental Justice," Robert Bullard, "Environmental justice embraces the principle that all people and communities have a right to equal protection and equal enforcement of environmental laws and regulations." The residents of Colfax live next to the only commercially operating open burn pit in the U.S., placing them at an elevated risk for adverse health effects. As part of this study, I hope that we will provide the community with information about their exposures and promote community empowerment and engagement to protect their health.

#### ***Tell us about a recent publication and why it is important to you and your field.***

I recently published a [review paper](#) regarding extracting EPFRs from samples for analysis. By comparing methods among EPFR studies, we hope to provide some information to assist with the selection of EPFR extraction methods and guide future EPFR studies. Understanding the best methods can also help us provide high-quality data for the community.

#### ***During your time as an SRP trainee, what factors have contributed most to your growth as a researcher?***

Communication is a critical factor in my growth as a researcher. Through effective communication with my mentor, I have

#### [Brownfields 2022 Conference](#)

August 16-19, 2022

Oklahoma City, Oklahoma

#### [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

#### [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.

collaborated on designing and revising our study plan as needed. Effective communication with community members and other researchers also brings new perspectives to the study.

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

Be confident and keep learning. It is challenging to grow from being a student to an independent researcher. It is easy to lose self-confidence, especially when facing a new challenge. Believe in your capability and expertise — and keep learning from everyone around you — and you will achieve your goals.

## **HOT PUBLICATION**

### **Nanofiltration Membranes Can Sustainably Separate PFAS from Water**

New membranes synthesized by researchers at the University of Kentucky SRP Center can [improve the removal of PFAS](#) in drinking water.

PFAS are a class of widely used and extremely persistent chemicals associated with a variety of negative health outcomes in humans. The removal of PFAS presents a challenge for drinking water providers.

Commonly used water filtering technologies, such as those that rely on carbon or resins to capture contaminants, cannot remove smaller PFAS molecules and can also potentially produce harmful byproducts. In addition, typical adsorption materials become saturated and need to be replaced frequently, impacting their sustainability.

In this study, the researchers synthesized microfiltration membranes that can hold materials within their pores. A synthetic polymeric nanofiltration membrane allows the pores to decrease in size and trap even small PFAS particles. This water purification method allows PFAS to get stuck in the membrane and separate from the water.

A disadvantage of nanofiltration membranes is that a percentage of the water does not pass through the membrane. When this remaining water is contaminated with PFAS, it needs to be treated before it can be discharged. To overcome this limitation, the team added a sponge-like thin film as a top layer, thereby creating a system that can more efficiently adsorb PFAS.

The researchers observed that their membranes successfully separated small and large PFAS molecules from water. According to the authors, this system shows promise as a sustainable water treatment process for PFAS.

## **AWARD WINNERS**

### **UAB SRP Researchers Recognized at ATS Meeting**

Crystal Stephens, the Research Translation Coordinator at the University of Alabama at Birmingham (UAB) SRP Center, received an [abstract scholarship award](#) by the Assembly on

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.

Nursing at the American Thoracic Society (ATS) International Conference.

UAB SRP Center project leader Aaron Brent Carter received the [Recognition of Early Academic Achievement](#) award from the Assembly on Respiratory Cell and Molecular Biology at the conference.

### **Duke SRP Scientists Expand Research Through New Grants**

Kate Hoffman, of the Duke University SRP Center, [received a grant](#) from NIH to study how exposure to semi-volatile organic compounds can impact children's immune function. Her research will be funded by the NIH [Stephen L. Katz Early-Stage Investigator Research Grant](#) program.

Duke SRP Center project leader Joel Meyer [received a grant](#) from the Duke Endowment to investigate environmental health risks in Durham, North Carolina, such as lead contamination, with the [Pauli Murray Center for History and Social Justice](#). The grant is part of a campus-wide initiative to study racial inequalities.

### **Chief Recognized for Research Achievements**

Karletta Chief, who leads the Community Engagement Core at the University of Arizona SRP Center, received the [Distinguished Outreach Faculty Award](#) from the University of Arizona for her work engaging with Native American communities through impactful research. The university also honored Chief with a [personalized bench](#) in its Women's Plaza of Honor in recognition of her leadership, research, and scholastic achievements.

### **Lohmann Receives Scholarly Excellence Award**

URI SRP Center Director Rainer Lohmann received the URI Foundation [Scholarly Excellence](#) Award, which honors faculty and staff whose hard work and dedication consistently elevate their departments, colleges, and the university.

### **Pribyl Wins Best Poster Award**

Lee Pribyl, a trainee at the Massachusetts Institute of Technology (MIT) SRP Center, won a Best Poster Award at the Genetic Toxicology Association's [Annual Meeting](#). Mentored by MIT SRP Center Director Bevin Engelward, Pribyl is conducting studies in mice to reveal biological responses to the chemical N-nitrosamine and link early biomarkers with later cancer development.

## **FUNDING OPPORTUNITIES**

### **Implementation Research to Reduce Noncommunicable Disease Burden**

**What:** Supports implementation research to address common risk factors for noncommunicable diseases in low- and middle-income countries and tribal nations during critical life stages and key transition periods.

**Funder:** NIH

**When:** [Applications due July 27](#).



## Funding Opportunity for Data Science Education Hub

**What:** Supports activities to increase availability and access to educational and research opportunities in cloud-based computational genomics and data science for students from groups that are underrepresented in these areas.

**Funder:** National Human Genome Research Institute

**When:** [Estimated application due date is July 27.](#)

## 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 assist with current CCH research and capacity-building efforts.

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

**When:** A letter of intent must be submitted by **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.](#)

## INTERAGENCY NEWS

### Request for Information: Bridging Neuroscience and Environmental Health Science

NIH requests comments on challenges and opportunities for research that brings together neuroscientists and environmental health scientists to better understand how environmental toxicants affect the nervous system across the life span.

[Responses are due July 11.](#)

### Request for Information: Promoting Equity in Global Health Research

NIH seeks input on approaches to promote greater equity in global health research, particularly research that engages scientists in low and middle-income countries. [Responses are due August 1.](#)

## CALL FOR ABSTRACTS

### Abstracts Requested for GSA Topical Session

**What:** Geological Society of America Fall Meeting.

**Description:** Call for abstracts for session on public health and naturally occurring contaminants

**When:** [Submissions due July 19.](#)

### New Method to Quantify PFAS

NCSU SRP Center researchers developed a [new method](#) to quantify PFAS using open-source data processing software. According to the authors, this method will facilitate sharing of data across labs and institutions.

### Geospatial Model for PFAS in Drinking Water

Scientists at the University of Kentucky SRP Center developed a [screening model](#) to identify PFAS hot spots in drinking water sources using public geospatial data.

### Intelligent Systems for Molecular Biology Conference

**What:** An annual international conference on [Intelligent Systems for Molecular Biology](#) focused on the development and application of advanced computational methods for biological problems.

**Where:** Madison, Wisconsin, and virtual.

**When:** July 10-14.

### DataWorks! Challenge

**What:** Tell your story of how data reuse or sharing furthered your research!

**Description:** The Federation of American Societies for Experimental Biology and NIH are hosting a challenge seeking innovative approaches to data sharing and reuse in biological and biomedical research.

**When:** [Entries close July 19](#).

### PHOTO OF THE MONTH



Students in the laboratory of UNC SRP project leader Fernando Manuel Pardo Villena, who is conducting studies on mice models to understand the relationship between environmental exposures and diseases, such as diabetes. (Photo courtesy of UNC)