

Superfund Research Program e-Posted Notes

September 4, 2020 (Issue 200)

HEADLINES

NIEHS Releases Request for Applications for SRP Multiproject Center Grants

NIEHS released the latest request for applications for the SRP Multiproject Center Grants, [RFA-ES-20-014](#). SRP Center grants will support problem-based, solution-oriented research centers that consist of multiple, integrated projects. Projects will represent both the biomedical and environmental science and engineering disciplines; as well as cores tasked with administrative (which includes research translation), data management and analysis, community engagement, research experience and training coordination, and research support functions. Letters of Intent are due **January 15, 2021** and applications are due **February 15, 2021**. For more information, refer to the [Multiproject Center Grant Funding Opportunities](#) page. The SRP will also host a webinar on October 1, 2020, which will provide more information about the RFA-ES-20-014. [Registration for the webinar](#) is now open.

SRP Releases 2020 - 2025 Strategic Plan

In 2020, SRP engaged stakeholders from academia, environmental health agencies, and not-for-profit organizations to review and refine the SRP strategic plan. The [2020 Strategic Plan](#) builds on the 2010 and 2015 SRP Strategic Plans that summarized program objectives and goals, and outlined strategies to achieve them. In the 2020 update, SRP reaffirms its commitment to the objectives presented in these previous iterations, while focusing SRP research and training through a systems approach lens to accommodate emerging complexity of environmental health issues.

Focusing SRP Research Through a Systems Approach Lens

A [recent publication](#) by SRP staff and colleagues illustrates how focusing SRP research through a systems approach lens can help integrate diverse fields of research to prevent or understand environmentally-influenced human disease by addressing specific questions that are part of a larger perspective. This approach can continue to advance SRP science while building the foundation for researchers to address difficult current and emerging environmental health problems.

EMPLOYMENT OPPORTUNITIES

Call for Volunteer Associate Editors – Environmental Health Perspectives

The journal Environmental Health Perspectives (EHP) seeks nominations for new Associate Editors with expertise across the environmental health sciences to join its [Board of Associate Editors](#).

Associate Editors evaluate papers that are being considered for full peer review, solicit peer reviewers, and summarize reviews in recommendations to the [Editor-in-Chief](#). The Associate Editor position is a volunteer role.

The ideal candidate has a strong sense of the relevant research field, an aptitude to recognize things that are novel and important, the ability to handle manuscripts across a wide range of topics and disciplines, and a good network of experts they can call upon to conduct reviews.

Associate Editors should expect to receive approximately three new submissions for evaluation each month and must be able to handle papers in a timely manner and participate in discussions regarding manuscripts they manage.

To nominate yourself or a colleague, send an email to ehpsubmission@niehs.nih.gov that includes the nominee's name and a brief explanation of their background

Save the Date: Progress in Research Webinars

The fall SRP Progress in Research webinar series will highlight promising research from SRP Centers awarded grants in 2020. These awards were made as part of the Multiproject Center Grant (P42) solicitation RFA-ES-18-002. In each session, awardees will describe their research projects, accomplishments, and next steps. The first session will be held on Wednesday **October 21 from 2 – 4 pm ET** and will feature researchers from the **University of North Carolina at Chapel Hill SRP Center**, the **Harvard School of Public Health SRP Center**, and the **University of Arizona SRP Center**. The subsequent sessions will be held Wednesday October 28, November 9, and November 19, 2020.

NIH Opportunities to Support COVID-19 Research

[Notice of Special Interest \(NOSI\): NIEHS Support for Understanding the Impact of Environmental Exposures on COVID-19](#) for mission-relevant research to understand the impact of environmental exposures on COVID-19 and its causative agent, SARS-Cov-2. **The next due date is October 1, with subsequent due dates at the beginning of each month until May 3, 2021.**

[Community Interventions to Address the Consequences of the COVID-19 Pandemic among Health Disparity and Vulnerable Populations \(R01- Clinical Trial Optional\)](#) encourages research with NIH-designated health disparity populations and other vulnerable groups on community interventions to address the adverse effects of SARS-CoV-2 and COVID-19. **Application due December 1, 2020.**

The NIH launched the Rapid Acceleration of Diagnostics (RADx) initiative to speed innovation in the development, commercialization, and implementation of technologies for COVID-19 testing.

NIH released several RADx Radical (RADx-rad) opportunities on August 6. RADx-rad will support new, non-traditional approaches, including rapid detection devices and home-based testing technologies, that address current gaps in COVID-19 testing. The program will also support new or non-traditional applications of existing approaches to make them more usable, accessible, or accurate. NIH published the following RADx-rad funding opportunities:

- [Notice of Special Interest: Chemosensory Testing as a COVID-19 Screening Tool](#), due September 15
- [Automatic Detection and Tracing of SARS-CoV-2](#), due September 15
- [RADx-rad Wastewater Detection of SARS-COV-2](#), due September 15
- [Chemosensory Testing as a COVID-19 Screening Tool](#), due

and subject matter that they are most qualified to handle. Self-nominating candidates should also include a brief explanation of why they are interested in being an *EHP* associate editor. For more information, see the [announcement](#).

EHP seeks a diverse pool of editors and especially welcomes the nomination of individuals from groups historically underrepresented in editorial positions.

CURRENT RESEARCH BRIEF

[SRP Research Brief 309](#): Toxic Breakdown Products Formed During Contaminant Clean-Up (David Sedlak, University of California Berkeley)

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

Video summaries of the SRP Research Briefs are available on the [NIEHS Social Media Shorts YouTube page](#).

EVENTS

[PFAS in Our World: What We Know and What We Can Do](#)

October 13-14, 2020
Virtual Conference

[Sixth Computational Approaches for Cancer Workshop](#)

November 15, 2020
Virtual Conference

[SC20](#)

November 9-19, 2020
Virtual Conference

[RDA 6th Plenary Meeting](#)

November 9-12, 2020
Virtual Conference

[2020 SRP Annual Meeting](#)

December 14-16, 2020

September 15

- [Screening for COVID-19 by Electronic-Nose Technology \(SCENT\)](#), due September 18
- [Exosome-based Non-traditional Technologies Towards Multi-Parametric and Integrated Approaches for SARS-CoV-2](#), due September 18
- [Novel Biosensing for Screening, Diagnosis and Monitoring of COVID-19 From Skin and The Oral Cavity \(R44 Clinical Trial Not Allowed\)](#), due September 18
- [Novel Biosensing for Screening, Diagnosis and Monitoring of COVID-19 From Skin and The Oral Cavity \(Fast-Track STTR Clinical Trial Not Allowed\)](#), due September 18
- [RADx-RAD Multimodal COVID-19 Surveillance Methods for High Risk Clustered Populations](#), due September 30
- [RADx-rad Data Coordination Center](#), due September 30
- [RADx-rad Predicting Viral-Associated Inflammatory Disease Severity in Children with Laboratory Diagnostics and Artificial Intelligence \(PreVAIL klds\)](#), due September 30

If you have any questions about the RADx opportunities, please reach out to your Program Officer or the NIEHS contact listed in the NOSI for more information. Visit the [NIH Coronavirus resource page](#) for the latest research information from NIH, including grants and funding information.

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:

- [Extramural Paper of the Month: Dragonflies provide insight into mercury pollution, citizen science study finds](#): A new SRP-funded study found that immature dragonfly larvae can be used to estimate the amount of mercury present in local fish, amphibians, and birds. The study leveraged a national-scale citizen science project that began more than a decade ago.
- [Virtual workshop explores newest PFAS research](#): Three NIEHS grantees presented their latest research on per- and polyfluoroalkyl substances, or PFAS, at a July 31 Federal Information Exchange. The online session — attended by more than 260 researchers with federal funding, federal employees, and state health representatives — was the first in a series of virtual workshops.

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

- [SRP Grantees Part of the Conversation on PFAS](#): A new virtual seminar series is providing an opportunity for researchers to share information on PFAS. The first session of the series, which kicked off on July 31 and included more than 400 participants, featured Angela Slitt, Ph.D., of the University of Rhode Island SRP Center.

College Station, Texas

[FLUOROS 2021 Symposium](#)

September 26-29, 2021

Providence, Rhode Island

[SETAC 8th World Congress](#)

Postponed (New date TBD)

Singapore

[11th Conference on Metal Toxicity and Carcinogenesis](#)

Postponed (New Date TBD)

Montreal, Canada

GET UPDATES FROM OTHER SRP GRANTEEES

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

- [New Approach Links Cell Studies to Human Health](#): A new NIEHS Superfund Research Program (SRP)-funded study demonstrated a strategy using data from cell studies to characterize how exposure to polychlorinated biphenyls (PCBs) may harm human health, particularly the cardiovascular system.
- [Dragonflies Provide Insight into Mercury Pollution Across U.S. National Parks](#): A researcher from the Dartmouth College SRP Center contributed to the first survey of mercury pollution in the U.S. National Park System. The study, built on nearly a decade of research across the country, found that immature dragonfly larvae can be used to estimate the amount of mercury that is present in local fish, amphibians, and birds.

American Heart Association Statement Picked up by Media

Columbia University SRP Center Director Ana Navas-Acien co-authored a [scientific statement](#) published by the American Heart Association highlighting health disparities among American Indians and Alaska Natives. Several outlets, including [EurekAlert](#), [TCTMD](#), [HCP Live](#), ran the story.

Horney Quoted on COVID-19

Texas A&M University SRP Center Community Engagement Core (CEC) leader Jennifer Horney has been featured in news stories about the COVID-19 pandemic, including [Aljazeera](#), [Science Magazine](#), and [Popular Science](#). She described how to safely evacuate and find shelter in the event of a hurricane during the pandemic, and challenges states are facing while trying to reopen.

Schaider Talks PFAS

University of Rhode Island SRP Center researcher Laurel Schaider was quoted in [Wired](#) about per- and poly-fluoroalkyl substances (PFAS) in food packaging. She also wrote an editorial for [Environmental Health News](#) highlighting how PFAS can harm the immune system.

Van Geen Study on Notre Dame Fire Draws Press

Columbia University SRP Center researcher Lex van Geen's recent study highlighting the possible extent of lead contamination surrounding the 2019 Notre Dame Cathedral Fire attracted media attention in the U.S. and abroad. Outlets, including [Crux](#), [Gizmodo](#), and [Salon](#), reported the findings. Van Geen's SRP research explores chemical and geological factors that influence how arsenic moves in the environment.

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

TRAINEE SPOTLIGHT

Fabian Grimm Explores New Approaches to Understand Chemical Toxicity

Former SRP trainee Fabian Grimm, Ph.D., specializes in new approaches to understand how exposure to chemicals can possibly affect human health. According to Grimm, much of his career's focus was shaped by the SRP's emphasis on transdisciplinary research and collaborative science.



Grimm began his career in biomedical research as a doctoral trainee at the University of Iowa SRP Center under the guidance of Michael Duffel, Ph.D. He studied the mechanisms by which exposure to polychlorinated biphenyls (PCBs), a large and complex group of chemicals, may affect thyroid function. After completing his Ph.D., he continued his postdoctoral training at the Texas A&M University SRP Center working with Center Director Ivan Rusyn, M.D., Ph.D. There, he focused on developing and using laboratory and computational approaches to advance regulatory science. For example, using novel cell models that better capture the physiology of organs to address critical gaps in knowledge about potentially hazardous chemicals and mixtures.

He also led a collaboration between his former colleagues at the University of Iowa and Texas A&M SRP Centers to study the mechanisms by which PCBs and their breakdown products may harm the cardiovascular system. This collaboration resulted in a [recent publication](#) demonstrating a strategy to characterize how exposure to PCBs and their metabolites may affect cardiac and vascular cells, data that can be used to make predictions based on the chemical and physical properties of other PCB compounds.

Grimm's research was recognized by several awards from the Society of Toxicology and other organizations. Among these was the ALTEX Prize in 2019 (Alternatives to Animal Experimentation) for his work using human cells as replacements for animal tests. He also received the Perry J. Gehring Risk Assessment Award from the Society of Toxicology Risk Assessment Specialty Section in 2017.

Today, Grimm works as a senior toxicologist at ExxonMobil Biomedical Sciences Inc., where he provides regulatory toxicology support related to human health risk assessment and is also involved in research and development activities to advance new methods to chemical safety evaluations. In collaboration with a team of researchers at Rutgers University-Camden, he recently published an innovative computational approach to [predict chemical toxicity](#). He is also an active member of the Society of Toxicology and is currently serving as the senior councilor to the SOT's Risk Assessment Specialty Section.

Outside of the office, Grimm enjoys spending time with his family

and seasonal activities such as beach days, bike tours, and winter sports. He also likes to work on home improvement projects.

HOT PUBLICATION

Linking DNA Modifications with Childhood Leukemia

Researchers at the University of California, Berkeley SRP Center recently uncovered clues that may help predict childhood leukemia using bloodspots taken at birth. In the [new study](#), researchers led by Stephen Rappaport used untargeted approaches to measure modifications to DNA that may be associated with childhood leukemia.

Untargeted approaches look for known and unknown modifications to DNA and proteins in biological samples such as blood and serum. In this study, the researchers used newborn blood spots to measure modifications that may be triggered by exposure to harmful chemicals in the womb.

The team measured a specific type of DNA modification, called adducts, in 782 newborn bloodspots to look for differences between children who later developed two different types of leukemia and children who did not. The abundance of some of the adducts measured in samples were different among the groups. For example, children who later developed a specific type of childhood acute lymphoblastic leukemia had more adducts involving reactive carbonyl species. Children who later developed acute myeloid leukemia, on the other hand, had lower levels of a different adduct compared to children without the disease.

According to the authors, the occurrence of certain adducts points to distinct molecular mechanisms involved in different types of childhood leukemia. While additional studies with more individuals are needed, they suggest certain alterations triggered during gestation and measurable in newborn bloodspots may be useful predictors of childhood leukemia.

AWARD WINNERS

Hoover Recognized for Teaching

University of Kentucky SRP Center researcher Anna Hoover received the College of Public Health Dean's Outstanding Undergraduate Teaching Performance Award. Hoover was nominated by both colleagues and students for the award. She also won the Delta Omega chapter's Innovative Teaching Curriculum Award for her new class focused on understanding and communicating environmental health risks.

FUNDING OPPORTUNITIES

MOSAIC K99/R00 Program

NIEHS has signed on to the [Maximizing Opportunities for](#)

[Scientific and Academic Independent Careers \(MOSIAC\)](#) program announcement led by the National Institute of General Medical Sciences. This is a K99/R00 program for postdoctoral fellows and trainees from diverse backgrounds. The program is part of NIH's efforts to enhance diversity within the academic biomedical research workforce and is designed to facilitate the transition of promising postdoctoral researchers from diverse backgrounds. In addition to the K99/R00 award, MOSAIC scholars will be part of organized scientific cohorts and will be expected to participate in mentoring, networking, and professional development activities coordinated by MOSAIC Institutionally-Focused Research Education Award to Promote Diversity (UE5) grantees. Applications are due **October 12, 2020**.

Virtual Consortium for Translational/Transdisciplinary Environmental Research (ViCTER) (R01 Clinical Trial Optional)

The purpose of the updated ViCTER program is to foster and promote early-stage transdisciplinary collaborations and translational research efforts among fundamental, clinical, and population-based researchers in the environmental health field. The newly established collaborative teams will come together to investigate potential links between human health and one or more environmental stressors. The ViCTER program is intended to support innovative high-risk, high-reward cross-disciplinary and/or translational research projects that are more difficult to achieve in a typical R01 application. Collaboration among investigators at different institutions through a virtual consortium arrangement are encouraged. See the [Funding Opportunity Announcement \(RFA-ES-18-007\)](#) for more information. Applications are due **December 1**; a letter of intent is due 30 days prior to the application due date.

Environmental Influences on Aging: Effects of Extreme Weather and Disaster Events

Two complementary funding opportunities aim to clarify the behavioral, biological, epigenetic, genetic, neurological, and socioecological processes that affect the aging process:

- [Effects of Extreme Weather and Disaster Events on Aging Processes \(R01 Clinical Trial Not Allowed\)](#) supports research exploring the impacts of extreme weather and disaster events on the basic biology of aging. Applications are due **November 9**; a letter of intent is due 30 days prior to the application due date.
- [Effects of Extreme Weather and Disaster Events on Aging Populations \(R01 Clinical Trial Optional\)](#) supports research to advance our understanding of the impact of extreme weather and disaster events in aging human populations. Applications are due **November 9**; a letter of intent is due 30 days prior to the application due date.

The goal of these companion funding opportunities is to improve

the health and well-being of older adults via increased knowledge about extreme weather and disaster preparedness, response, and recovery.

Research to Action: Assessing and Addressing Community Exposures to Environmental Contaminants (R01 Clinical Trial Optional)

This [funding opportunity](#) encourages multidisciplinary projects to investigate the potential health risks of environmental exposures of concern to a community and to implement an environmental public health action plan based on research findings. Projects supported under this program are expected to use community-engaged research methods to not only conduct research but also to translate research findings into public health action. The Research to Action program is part of the NIEHS Partnerships for Environmental Public Health network. Visit the [Research to Action Currently Funded Grantees webpage](#) for a sense of the types of projects supported through the program. Applications are due **December 4, 2020**.

Biomedical Knowledgebase (U24 – Clinical Trials Not Allowed)

The funding opportunity announcement for [Biomedical Knowledgebase \(U24 – Clinical Trials Not Allowed\)](#) has been published. The first application due date is **September 25, 2020**.

This funding opportunity supports biomedical knowledgebases with the primary function to extract, accumulate, organize, annotate, and link growing bodies of information related to core datasets. Support for data curation should include efficient and effective methods that scale to the needs of the community and include semi-automated methods. Support for software and tool development must be limited to that which provides essential functions or significantly increases the efficiency of operation of the knowledgebase. Applications that have a significant focus on software or tool development are not appropriate for this activity.

Biomedical Data Repository (U24 – Clinical Trials Not Allowed)

The funding opportunity announcement for [Biomedical Data Repository \(U24 – Clinical Trials Not Allowed\)](#) has been published. The first application due date is **September 25, 2020**.

This funding opportunity is designed to support biomedical data repositories with the primary function to ingest, archive, preserve, manage, distribute, and make accessible the data related to a particular system or systems. Support for data curation must be limited to that which improves the efficiency and accessibility of data ingestion, management, and use and reuse by the user communities. Support for software and tool development must be limited to that which provides essential functions or significantly increases the efficiency of operation of the repository. Applications that have a significant focus on software and tool

development are not appropriate for this activity.

INTERAGENCY NEWS

National Children's Study Biological and Environmental Samples Now Available

Biological and environmental sample materials from the National Children's Study (NCS) Vanguard are now available for secondary research use. NCS Vanguard was a pilot for a planned cohort study of environmental influences on child health and development. The study enrolled over 14,000 participants throughout the U.S. and followed them for five years. It collected nearly 19,000 biological and 5,500 environmental samples. Biological samples include blood, urine, saliva, breast milk, and vaginal swabs. Environmental samples include dust, indoor air, infant formula, and water.

Sample materials can be [requested](#) through the Eunice Kennedy Shriver National Institute of Child Health and Human Development's [Data and Specimen Hub](#). Samples are available in limited quantities and for a limited time. See the Notice ([NOT-HD-20-018](#)) for more information.

DATA SCIENCE AND DATA SHARING

The TRUST Principles for digital repositories

Following a year-long public discussion and consensus among experts, stakeholders across the digital repository community collaboratively [developed a set of guiding principles](#) to demonstrate the trustworthiness of digital repositories. The TRUST (Transparency, Responsibility, User focus, Sustainability and Technology) Principles provide a common framework to discussing and implementing sound data stewardship.

International FAIR Convergence Symposium

The [International FAIR Convergence Symposium](#) will now take place as a fully virtual event from 30 November to 4 December 2020. The International FAIR Convergence Symposium will provide a forum for advancing international and cross-domain convergence around FAIR. The event will bring together a global data community with an interest in combining data across domains for a host of research issues – including major global challenges, such as those relating to the Sustainable Development Goals or the COVID-19 pandemic. Outcomes will directly link to the CODATA Decadal Programme 'Data for the Planet: making data work for cross-domain grand challenges' and to the bottom-up developments of the GO FAIR community towards the Internet of FAIR data and services.

Participation is open to ALL researchers and data experts, particularly those with an interest in participating in the CODATA Decadal Programme and in the GO FAIR community.

SC20

The [International Conference for High Performance Computing, Networking, Storage, and Analysis](#) (SC20) will be a fully virtual conference in November this year. The Program is designed to share best practices in areas such as algorithms, applications, architectures and networks, clouds and distributed computing, machine learning, system software, and state of the practice in large-scale deployment and integration. It will also cover data analytics, visualization, and storage. Early registration closes **October 19**.

Computational Approaches for Cancer Workshop

The National Cancer Institute Center for Biomedical Informatics and Information Technology and SC20 have announced the [Sixth Computational Approaches for Cancer Workshop](#) (CAFCW20). CAFCW20 is a workshop designed to bring together clinicians, cancer biologists, mathematicians, data scientists, computational scientists, engineers, developers, thought leaders, and anyone else interested in advancing computation to use in cancer care and research. This year's topic is "AI and HPC: Overcoming Data Challenges in Cancer Research and Clinical Applications."

A special emphasis for the CAFCW20 is the role of HPC and AI to address research challenges when data are limited by availability, variability, and size. The workshop will be held in conjunction with SC20 on **November 15**.

RDA 16th Plenary Meeting

The [16th Plenary meeting of the Research Data Alliance](#) (RDA) will take place November 9-12, 2020. With the theme "Knowledge Ecology", the event is co-organized by CONARE Costa Rica, RDA United States and Research Data Canada. The virtual plenary meeting will provide attendees the opportunity to remotely attend plenary sessions, participate in multiple breakout sessions, attend poster sessions and collaborate with attendees. The deadline to submit posters is **October 23, 2020**.

HHEAR is Accepting Applications

Applications are being accepted for the [Human Health Exposure Analysis Resource \(HHEAR\)](#) program, which provides health researchers access to laboratory and data analysis services to expand assessment of environmental exposures in their existing NIH-funded epidemiological and clinical health studies.

To [check your eligibility](#), visit the program website. SRP grantees are eligible for targeted and untargeted analysis of environmental samples, and untargeted analysis of biological samples.

To apply to HHEAR, visit the [How to Apply](#) page. The next submission deadline is **October 30, 2020**. For questions related to the application process, contact HHEARHelp@Westat.com

You can learn more about HHEAR's goals, application processes,

and laboratory and data analytic capabilities through the [NIEHS Exposure Science and the Exposome Webinar Series on HHEAR](#). You can access the webinar archive on the [Seminar Series YouTube Channel](#). If you have any questions regarding the information shared in the webinar series, please contact Michelle Heacock (heacockm@niehs.nih.gov).

PHOTO OF THE MONTH



The University of Alabama Birmingham SRP Center team mobilized to use 3-D printers to create frames for face shields to protect people from exposure to COVID-19. Using more than 60 printers, students, university labs, and community members worked together to meet the statewide goal of producing 10,000 frames. (Photos courtesy of the UAB SRP Center)

