

Superfund Research Program e-Posted Notes

August 4, 2017 (Issue 163)

HEADLINES

2017 K.C. Donnelly Winners Announced

Congratulations to the eight exceptional SRP trainees who received a 2017 K.C. Donnelly Externship Award Supplement to enrich their research in environmental health science. The award provides the SRP trainees with funding for an externship at other SRP centers, government laboratories, and state, local, or tribal agencies to support transdisciplinary research and collaboration.

The [2017 winners](#) are: Oluwadamilare Adebambo (NC State University; University of North Carolina SRP), Pamela Barrett (University of Washington SRP), Anne Bozack (Columbia University SRP), Nancy Cardona-Cordero (University of Puerto Rico; Northeastern University SRP), Rosemarie de la Rosa (UC Berkeley SRP), Jennifer Guelfo (Brown University SRP), Victoria Parker (University of Iowa SRP), and Eric Uwimana (University of Iowa SRP).

SRP Wetterhahn Award Lecture

Join us on August 8 for the annual SRP Wetterhahn Award Lecture, which highlights research from the most recent winner of the [Karen Wetterhahn Memorial Award](#). The 2016 winner, [Elizabeth Martin](#), Ph.D., will present a talk titled, "Prenatal Arsenic Exposure and Sexual Epigenetic Dimorphism: Sexual Dimorphism of 5-Methylcytosine Alterations in Newborn Cord Blood from the BEAR Cohort." The talk will be held at the National Institute of Environmental Health Sciences, Building 101, Rodbell AB on Tuesday, August 8, 2017, from 10:00 to 11:00 a.m. EDT. The event also will be [webcast](#).

Guide the Next NIEHS Strategic Plan

As the end of the [2012-2017 Strategic Plan](#) approaches, NIEHS is seeking guidance from the environmental health science community for the next five-year strategic plan. A new [editorial](#) by NIEHS Director Linda Birnbaum describes the Institute's ongoing process to update its 2012–2017 Strategic Plan and invites readers to respond to a survey soliciting comments on how current trends, ideas, practices, and needs in environmental health sciences might help NIEHS to shape the next phase of its work. Please share your ideas about NIEHS's future research

EMPLOYMENT OPPORTUNITIES

2018 APHA Public Health Fellowship in Government

The American Public Health Association (APHA) is now accepting applications for the [Public Health Fellowship in Government](#).

The fellowship provides a unique learning experience and demonstrates the value and need for basing policy on sound science. The fellow will have the option of working in the House or Senate on legislative and policy issues such as creating healthy communities, improving health equity, addressing environmental health concerns, population health, or the social determinants of health.

The fellowship is open to all APHA members who are public health professionals. Candidates must have a graduate degree in public health or related discipline and have at least five years of experience as a public health professional beyond graduate or medical training. All candidates must be a U.S. citizen or permanent resident. The fellowship is based in Washington, D.C. and runs from January through December 2018. Applications are due by **August 14, 2017**.

Postdoctoral Research Associate – University of Arizona

A postdoctoral position is available in the Maier Environmental Microbiology research group at the

priorities through the [Trends & Insights survey](#) by **August 11**.

Save the Date: SRP 30th Anniversary Meeting

The [SRP Annual Meeting](#) will be held **December 6 - 8, 2017** in Philadelphia, Pennsylvania. The 2017 meeting will celebrate the 30th anniversary of the program, showcasing SRP's accomplishments to protect human health and the environment. The University of Pennsylvania SRP Center will be hosting the meeting in collaboration with SRP Centers at Boston University, Brown University, Columbia University, Dartmouth College, and Northeastern University. More information coming soon.

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:

- [Exceptional Superfund Trainees Receive K.C. Donnelly Externship Awards](#)
- [Paper of the Month: Airborne PCBs in Urban and Rural U.S. Schools](#)

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

- [Risk e-Learning Web Seminar Series on Analytical Tools and Methods a Big Success](#)
- [Arizona Emerging Contaminants Report Informed by UA SRP Researchers](#)
- [Special Issue Highlights Environmental Challenges in Central and Eastern Europe](#)
- [UA SRP Center Communicates Findings at Community Forum](#)

SRP Grantees Highlighted in PEPH Stories

SRP grantees Frances Barg and Carmen M. Vélez-Vega were both recently featured as NIEHS Partnerships for Environmental Public Health grantee highlights.

[Frances Barg](#), co-leader of the University of Pennsylvania SRP Center Community Engagement Core (CEC), has worked diligently to find creative and intuitive ways to engage communities affected by hazardous waste. Barg, a medical anthropologist, uses social science methods to understand the current and long-term impact of exposure to asbestos for residents of Ambler, PA.

[Carmen Vélez-Vega](#), co-leader of the Northeastern SRP Center CEC, has witnessed first-hand how underserved communities are impacted by health disparities, social inequalities, and a lack of public health infrastructure. Vélez-Vega, who spent most of her life in Puerto Rico, has a strong passion for social justice, public health, and equality that is firmly rooted in her own personal

University of Arizona for a highly motivated, creative, and independent candidate with a Ph.D. in microbiology / microbial ecology / environmental microbiology or related field. The candidate will be involved in multiple projects that address biogeochemical contributions of the soil microbiome to the sustainability of marginal arid ecosystems. The primary research focus of this position will be the complex biogeochemical processes and plant-microbe interactions that occur during phytoremediation of pyritic mine wastes. Associated projects include the significance of the soil microbiome to dryland ecosystem sustainability and reclamation and the production of biofuel crops in marginal soils. The successful candidate will integrate multiple molecular biology and bioinformatics tools such as metagenomics, metatranscriptomics, genome reconstruction, and qPCR to define dynamic contributions of specific members of the soil microbiome to geochemical (nutrient) cycling under diverse environmental conditions. For more information, see the [full announcement](#).

Postdoctoral Research Associate in Environmental Epidemiology - Boston University

The Boston University School of Public Health (BU SPH) is offering a postdoctoral research associate opportunity in environmental epidemiology, focusing on the investigation of an epidemic of chronic kidney disease (CKD) in Central America. BU SPH has been [investigating the CKD epidemic](#) since 2009 and is currently launching a large prospective cohort study of workers in Nicaragua and El Salvador. The postdoctoral associate will analyze existing data from past field work in Central America, lead an analysis of

experiences.

SRP Featured in PNAS Phytoremediation Article

A recent [story](#) in the journal Proceedings of the National Academy of Sciences (PNAS) discusses phytoremediation, or using plants to immobilize or extract toxins from contaminated soil and water. The article includes information about how the SRP has funded phytoremediation research from the start of the field, including the pioneering work of biochemist Milton Gordon of the University of Washington, who [showed](#) in the 1990s that hybrid poplar trees can extract and detoxify the organic solvent trichloroethene from groundwater. SRP Director Bill Suk and former SRP small business grantee Michael Blaylock of Edenspace Systems Corporation are quoted in the article.

13th Annual International Mercury Conference a Success

Dartmouth SRP researcher and Research Translation Core leader Celia Chen co-chaired the 13th annual [International Conference for Mercury as a Global Pollutant \(ICMGP\)](#) with Charles Driscoll, professor of Environmental Systems Engineering from Syracuse University. The meeting, held the week of July 17, focused on understanding and effectively managing mercury releases and emissions to decrease human and wildlife exposure.

Chen introduced plenary speakers, including former U.S. EPA Administrator, Gena McCarthy, and provided the opening address for the meeting with Driscoll. Grantees from Dartmouth and other SRP Centers attended and presented oral sessions and posters. Dartmouth RTC coordinator Laurie Rardin organized an information table for the Dartmouth SRP group that distributed fact sheets, Sources to Seafood videos, and information on their research, translation, and community engagement efforts.

TRAINEE SPOTLIGHT

Ralph Pietrofesa Investigates Potential Ways to Protect Against Asbestos-Induced Mesothelioma

Ralph Pietrofesa is a graduate student at the University of Pennsylvania SRP Center under the direction of Melpo Christofidou-Solomidou. His research focuses on investigating the role of flaxseed and its derivatives in preventing asbestos-induced lung disease. He uses rodent models with accelerated mesothelioma development to explore whether flaxseed or flaxseed derivatives could potentially be used to prevent development of mesothelioma in asbestos-exposed population.



electronic medical records and health care claims data from the U.S., and prepare manuscripts for publication. The successful candidate must have recently completed a Ph.D./doctorate in epidemiology, environmental health, or related field; have strong quantitative skills; and have an interest in kidney disease / kidney function. Madeleine Scammell, D.Sc., in the Department of Environmental Health will serve as the primary supervisor. This is a two-year position. Travel in the first year will be limited; there is potential for travel in year two. To apply, send a CV and a letter describing your interests to Madeleine Scammell (mis@bu.edu). Please put "Environmental Epidemiology Postdoctoral Associate" in the subject line. For more information, see the [full announcement](#).

Postdoctoral Associate in Community Engagement - Boston University

The BU SPH is seeking a Community Engagement (CE) postdoctoral associate to work with [BU Superfund Research Program \(BU SRP\) Center](#) and [Center for Research on Social and Environmental Stressors in Housing Across the Life Course \(CRESSH\)](#) investigators, Core leaders, and community partners to facilitate, evaluate, and document community engagement activities. The successful candidate must have a Ph.D./doctorate in social sciences or in a public or environmental health field; expertise in qualitative research; knowledge of environmental health / environmental epidemiology; and community engagement experience. The primary postdoctoral supervisor will be Madeleine Scammell, D.Sc. This is a two-year position. To apply, send a CV and a letter describing your interests to Madeleine Scammell (mis@bu.edu). Please put

A [study](#) by Pietrofesa and colleagues last year reported that a compound derived from flaxseed called lignan secoisolariciresinol diglucoside (LGM2605) prevented cell death and the subsequent oxidative stress in mice brought into contact with asbestos. According to the authors, the ability of LGM2605 to interfere in multiple molecular pathways—boosting antioxidant defenses and scavenging free radicals—provides strong evidence for its potential usefulness as a chemopreventive agent in asbestos-induced mesothelioma. It also provides encouraging findings that support the further evaluation of LGM2605 in chronic, *in vivo* models of malignant mesothelioma.

Pietrofesa was also a [2016 K.C. Donnelly Award winner](#). For his externship, he traveled to Brown University to work with Agnes Kane and explore the influence of synthetic flaxseed derivatives on the toxicity of another compound, copper-based nanoparticles. The externship extended his current work on asbestos to another potentially harmful exposure in the environment while enabling him to gain valuable experience in toxicological research and learn novel analytical techniques.

HOT PUBLICATION

Breathable Vapor Toxicant Barriers Based on Multilayer Graphene Oxide

Films consisting of a chemically modified form of graphene, the single-atom-thick sheet-like nanomaterial first isolated in 2004, have potential as water-breathable barrier layers for personal protective equipment, according to a recent [study](#) from the Brown SRP Center. The Brown team designed and built a new device to measure the permeation of small-molecular toxicants in the presence of simulated perspiration to show that the films allow outward perspiration while protecting the wearer from trichloroethylene, a solvent and common environmental pollutant.

There is great interest in the development of new materials for personal protective equipment that allow for body temperature control for the wearer. These “breathable” protective fabrics must overcome the conflicting challenges of simultaneously excluding external toxicants while being permeable to water-vapor generated by perspiration.

AWARD WINNERS

Blair Receives 2017 ACS Founders' Award

University of Pennsylvania SRP Center Director Blair has won the [2017 Founders' Award](#) from the Division of Chemical Toxicology of the American Chemical Society (ACS) for his outstanding contributions to the field of chemical toxicology. He has pioneered the use of mass spectrometry to identify biomarkers for carcinogenesis, cardiovascular disease, and neurodegeneration. He developed electron capture atmospheric pressure chemical

"Community Engagement Postdoctoral Associate" in the subject line. For more information, see the [full announcement](#).

Postdoctoral Fellow – Silent Spring Institute and Northeastern University

This two-year appointment is part of the NIEHS Training Program, “Transdisciplinary Training at the Intersection of Environmental Health Science and Social Science” (EH+SS), co-directed by the Silent Spring Institute and Northeastern University’s Social Science Environmental Health Research Institute (SSEHRI). The fellowship is part of a unique opportunity to engage in environmental health - social science training. They are seeking a candidate with doctoral training in endocrinology, developmental biology, or cancer biology with a focus on environmental health. Applicants should demonstrate a strong research record as well as experience in statistics, biology, toxicology, chemistry, computer science, or informatics. R programming is an asset.

In addition to a strong background in her/his discipline, the candidate should have an interest in public health, community-based participatory research, and the social context of environmental health. The postdoctoral fellow will spend 2/3 of her/his time at Silent Spring Institute and 1/3 at Northeastern University. The fellow will collaborate with Silent Spring Institute and Northeastern scientists on one or more ongoing research projects and will have access to cutting-edge resources and technologies at Northeastern University and other collaborating institutions.

They currently are seeking applicants for one position to start as soon as possible. Review of

ionization, which makes it possible to conduct quantitative analyses on chiral biomolecules. Blair will receive the award during a symposium in his honor on August 20 at the 254th ACS National Meeting in Washington, D.C. August 20-24, 2017.

Kaminski Receives George H. Scott Memorial Award from The Toxicology Forum

Michigan State University SRP Center Director Norbert Kaminski was awarded the George H. Scott Memorial Award at the 43rd Annual Summer Meeting of The Toxicology Forum, held July 10-12, 2017 in Annapolis, Maryland. Kaminski gave the George Scott Award Lecture at the meeting on 'Role of the Aryl Hydrocarbon Receptor in Human Stem Cell to B Cell Lineage Commitment.'

The award's namesake, George H. Scott, was a Procter & Gamble scientist who gained worldwide respect for his tireless efforts and contributions in the fields of human and environmental toxicology. The annual award, established by The Toxicology Forum in 1983, is given in honor of Scott to those who have demonstrated an outstanding role in developing and applying the science of toxicology.

WEBINARS AND TRAININGS

FRTR Presents: Heavy Metals-Mining Site Characterization and Treatment

The Federal Remediation Technology Roundtable (FRTR) invites you to attend a series of webinars on the characterization and treatment of heavy metals at mining sites. Each webinar is based on a presentation given at FRTR's Spring 2017 meeting held on May 9, 2017. The webinars are being provided as part of the [CLU-IN Mining Sites Webinar Series](#).

Session 3 will be held on **Thursday, August 10, 2017, from 1:00 to 3:00 p.m. EDT**. Matthew Bobo, Geospatial Section Chief (BLM) and Kate Campbell, Ph.D., Research Chemist (USGS) will focus on different techniques for site characterization and modelling. To register, please visit the [CLU-IN webinar webpage](#).

Archives are available on CLU-IN for [Session 1](#) and [Session 2](#), which described the risk assessment process for mercury releases at a hazardous waste site and explained potential applications of anaerobic and aerobic water-treatment techniques for remediation of mining influenced water.

4th International Symposium on Systematic Review and Meta-Analysis of Laboratory Animal Studies

The role of systematic review and meta-analysis in preclinical science, toxicology, and public health is evolving rapidly. The National Toxicology Program is hosting the [4th International Symposium on Systematic Review and Meta-Analysis of Laboratory Animal Studies](#) for newcomers and experts alike, with strategic overviews and explicit examples of how systematic

applications will begin immediately, and the search will remain open until the position is closed or filled. For more information, see the full job description on the [Silent Spring Institute website](#).

CURRENT RESEARCH BRIEF

[Research Brief 272](#): "TBT Alters Bone Marrow Microenvironment and Suppresses Important Immune Cells" (Jennifer Schlezinger, Ph.D., Boston University)

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).

SRP EVENTS

Wetterhahn Award Lecture
Elizabeth Martin, Ph.D., University of North Carolina at Chapel Hill
August 8, 2017 • 10:00 - 11:00 a.m. EDT
Research Triangle Park, North Carolina and [Webcast Flyer](#)

254th ACS National Meeting & Exposition
August 20 - 24, 2017
Washington, DC
[Website](#)

Dioxin 2017
August 20 - 25, 2017
Vancouver, Canada
[Website](#)

1st Annual National Native Health Research Training Conference
September 18 - 20, 2017
Denver, Colorado
[Website](#)

21st North American ISSX Meeting
September 24 - 28, 2017
Providence, Rhode Island

review approaches are being applied and how methods are evolving to answer a diverse range of research questions.

The meeting will be held **August 24-25, 2017**, at NIEHS in Research Triangle Park, North Carolina. To reserve your spot, visit the [symposium registration page](#) by **August 11, 2017**. To register to view the meeting via webcast, please visit the [webcast registration page](#).

CALL FOR ABSTRACTS

Special Topics Conference on Healthcare Innovations and Point-of-Care Technologies

The Institute of Electrical and Electronics Engineers and the National Institutes of Health are hosting the [2017 Special Topics Conference on Healthcare Innovations and Point-of-Care Technologies](#) at the NIH Natcher Conference Center in Bethesda, Maryland, November 6-8. The conference will provide an international forum with clinicians, healthcare providers, industry experts, innovators, policy professionals, researchers, and students to define clinical needs and technology solutions towards commercialization and translation to clinical applications across different environments and infrastructures.

The submission deadline is **September 15, 2017**, for 4-page paper submissions, 4-page student competition papers, and 1-page technical papers. The submission deadline is **August 15, 2017**, for 2-page translation demo showcase proposals. All researchers, clinicians and students engaged in scientific and clinical research related to healthcare applications are invited to attend.

FUNDING OPPORTUNITIES

Now Accepting SRP Wetterhahn Applications

The NIEHS SRP is accepting applications for the 20th Annual Karen Wetterhahn Memorial Award. The winner will be announced at the SRP Annual Meeting, December 6 - 8, 2017 in Philadelphia, Pennsylvania, and will present his or her research at the meeting.

The SRP has established this annual award to recognize an outstanding SRP graduate student or post-doctoral researcher who best demonstrates the qualities of scientific excellence exhibited by [Karen Wetterhahn](#), who passed away in 1997. All SRP trainees may apply (an SRP trainee is funded directly by an SRP grant (P42 or R01) or is conducting research/activities funded by an SRP grant).

The deadline for applications is August 31, 2017. [Application guidelines](#) and [bios from past winners](#) are posted online. Please contact Danielle Carlin (danielle.carlin@nih.gov) or the assigned program administrator for your SRP grant if you have any questions or are interested in applying or nominating your trainee.

[Website](#)

Southeast Asia Regional Conference on Groundwater Arsenic

November 2 - 3, 2017
Hanoi, Vietnam

[Website](#)

SETAC North America Annual Meeting

November 12 - 16, 2017
Minneapolis, Minnesota

[Website](#)

SRP Annual Meeting

December 6 - 8, 2017
Philadelphia, Pennsylvania

[Flyer](#)

GET UPDATES FROM OTHER SRP GRANTEES

To see the latest SRP grantee publications, visit the [SRP 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

We look forward to seeing many great applications!

SRP Updates Topics for SBIR Grants

SRP's "Hazardous Substances Detection and Remediation Program" supports Small Business Innovation Research Grants (SBIR, R43, R44) to foster the commercialization of technologies, products, and devices for detection and remediation of hazardous substances in the environment. The SRP is specifically interested in proposals applying new engineering, bioengineering, and biotechnology approaches to develop novel strategies to characterize, monitor, and remediate hazardous substances at contaminated sites, for a range of [high priority topics](#).

Please see the [NIH SBIR webpage](#) for application information or visit the [NIEHS SBIR webpage](#) for other SBIR opportunities within the Institute. Annual Application Receipt Dates are January 5, April 5, and September 5, 2017; however, applicants are encouraged to submit their applications several days in advance of the deadline. Please note: SRP no longer accepts Small Business Technology Transfer Grant (STTR: R41, R42) applications.

EPA Seeks Applications for Research on Lead in Drinking Water

The EPA is seeking applications proposing innovative research on detecting and controlling lead in drinking water. The [National Priorities: Transdisciplinary Research into Detecting and Controlling Lead in Drinking Water Request for Applications \(RFA\)](#) calls for research partnerships and collaborations with local communities that are potentially most vulnerable to exposures to lead in drinking water. Applications are due **August 15, 2017**.

Applications should propose multidisciplinary research of lead in community water supplies, issues with lead in water treatment and distribution, and the potential effects of lead on public health.

Grants awarded under this RFA will support the collection of data and analytical models that help communities identify and remediate the risks associated with lead in drinking water. This research also will help improve understanding of data sampling protocols and of the factors influencing how different communities are exposed to lead in drinking water.

Toxics 2018 Travel Award

The [Toxics 2018 Travel Award](#) will help towards travel costs for a postdoctoral fellow or non-fellow postdoctoral trainee in toxicology research to present his/her data, in poster or oral presentation format, at a scientific conference in 2018. The prize will consist of 800 Swiss francs. Applications are due **November 30, 2017**. The winners will be announced by the end of January 2018.

NHGRI Genomic Data Science Analysis, Visualization, and Informatics Lab-space (AnVIL)

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.

The [AnVIL Funding Opportunity Announcement](#) supports an interoperable resource for the research community by co-locating data, storage, and computing infrastructure with commonly used services and tools for analyzing and sharing data. The AnVIL will further advance research by leveraging a cloud-based infrastructure to facilitate genomic data access by the broad scientific community, integration and computing on and across large datasets generated by NHGRI programs, or programs funded by others in support of human genomics research. The AnVIL resource will provide genomic researchers with the following:

- Cloud-based infrastructure and software platform
- Shared analysis and computing environment
- Participation in a federated genomic data commons ecosystem
- Cloud services cost control
- Genomic datasets, phenotypes and metadata
- Data access and data security
- User training and outreach
- Incorporation of scientific and technology advances

Letters of intent are due **October 9, 2017**. Full application are due **November 9, 2017**. Applicants are encouraged to apply early to allow adequate time to make any corrections to errors found in the application during the submission process by the due date.

INTERAGENCY NEWS

New EPA Tool Helps Communities Access More Than \$10 Billion in Water Infrastructure Financing

The U.S. Environmental Protection Agency (EPA) launched the [Water Finance Clearinghouse](#), a web based portal to help communities make informed financing decisions for their drinking water, wastewater, and stormwater infrastructure needs. The Clearinghouse provides communities with a searchable database with more than \$10 billion in water funding sources and over 550 resources to support local water infrastructure projects. It consolidates and expands upon existing EPA-supported databases to create a one-stop-shop for all community water finance needs.

The Water Finance Clearinghouse was developed by EPA's [Water Infrastructure and Resiliency Finance Center](#), an information and assistance center that provides financing information to help local decision makers make informed decisions for drinking water, wastewater, and stormwater infrastructure to reach their public health and environmental goals.

New Widget Makes It Easy to Share Health Disparities Data

The U.S. Department of Health and Human Services [Healthy People 2020](#) initiative recently launched a web application, called

a widget, that makes it easy to share health disparities data on your organization's website. The health disparities widget lets users browse by disparity type or Leading Health Indicator (LHI), then view the data in clear graphics. LHIs are critical health issues, such as environmental quality and access to health services, that – if tackled appropriately – will dramatically reduce the leading causes of death and preventable illnesses. The widget is easy to [add to any webpage](#), and content will update automatically.

New Report Offers Recommendations for Citizen Science and Environmental Health Research

A [new report](#) recommends the incorporation of citizen science approaches into environmental health research to ensure that community concerns are adequately addressed. The report is the result of two days of stakeholder discussions held in December 2016 at the Research Triangle Environmental Health Collaborative (EHC) Summit, titled [Community Engaged Research and Citizen Science: Advancing Environmental Public Health to Meet the Needs of our Communities](#), in Research Triangle Park, North Carolina.

