



Superfund Research Program *e-Posted Notes*

December 8, 2017 (Issue 167)

HEADLINES

SRP 30th Anniversary Meeting a Success

Thanks to the University of Pennsylvania SRP Center and everyone involved in this year's SRP Annual Meeting for making it a success!

The meeting, held in Philadelphia, celebrated the 30th anniversary of the program, showcasing SRP's accomplishments to protect human health and the environment. Thank you to everyone who contributed accomplishments and photos to the SRP timeline. For more about the meeting, look for the e-Posted Annual Meeting special edition in mid-January.

Angela Gutierrez Receives 2017 Wetterhahn Memorial Award

Congratulations to [Angela Gutierrez](#), the 20th recipient of the annual Karen Wetterhahn Memorial Award. The Wetterhahn Award honors one outstanding SRP graduate student or postdoctoral researcher each year who exemplifies qualities of scientific excellence. Gutierrez, who is pursuing her Ph.D. at the University of Kentucky, is developing magnetic nanoparticles coated with plant-derived polymers, called polyphenols, that can capture and remove polychlorinated biphenyls (PCBs) from water.

Risk e-Learning Fall Webinar Series Archives Available

If you missed the fall SRP Risk e-Learning webinar series on Adverse Outcome Pathways (AOPs), the archives for both sessions are now available. AOPs are structured representations of biological events leading to adverse health effects.

In the first session, [Introduction to the Adverse Outcome Pathway Framework](#), presenters described AOPs and discussed the AOP Knowledge Base, which is designed to house descriptions of the biological mechanisms underlying chemical toxicity in a structured manner. In the second session, [Assembling and Assessing AOP Information](#), presenters discussed the development of AOPs and how they may be used to support hazard and risk assessment.

These webinars were also in support of an upcoming NIEHS workshop, [Understanding the Combined Effects of Environmental Chemical and Non-Chemical Stressors: Atherosclerosis as a](#)

EMPLOYMENT OPPORTUNITIES

Postdoctoral Fellow, Laboratory of Cardiovascular Redox Signaling - Johns Hopkins University

The Johns Hopkins Bloomberg School of Public Health is recruiting a motivated and creative scientist to pursue independent and collaborative research as a postdoctoral fellow in the Laboratory of Cardiovascular Redox Signaling. This is an excellent opportunity to join an exciting research team focused on elucidating oxidative signaling pathways in cardioprotection and cardiovascular disease. Studies in the laboratory currently use cutting-edge physiological, proteomic, and molecular approaches to assess the role of protein S-nitrosylation in the heart. The applicant should possess a Ph.D., M.D., or equivalent. Qualified candidates should send a cover letter, CV, and contact information for three references to Mark Kohr (mkohr1@jhu.edu).

Tenure Track Faculty Position - University of Rochester

The Department of Environmental Medicine at the University of Rochester School of Medicine and Dentistry invites applications for Assistant or Associate Professor in the tenure track. They are especially interested in candidates with a passion for biomedical research focusing on how the environment

[Model](#), which will be held April 3 - 4, 2018 at the NIEHS Main Campus, Research Triangle Park, North Carolina.

SRP SBIR/STTR Funding Opportunity Due January 5

SRP [Small Business Innovation Research and Small Business Technology Transfer Grants](#) (SBIR/STTR, R41, R42, R43, R44) are awarded to foster the commercialization of technologies, products, and devices developed by SRP grantees and others. Please see the [Hazardous Substances Remediation and Site Characterization SBIR Program page](#) for more information on the SRP SBIR/STTR grants.

The next application receipt due date is **January 5, 2017**. If you are interested in applying, please contact Heather Henry (henryh@niehs.nih.gov).

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:

- [Inflammation promotes liver cancer through battle of immune cells](#)
- [International meeting strengthens environmental health network](#)
- [Arsenic exposure declines after new EPA regulations](#)

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

- [SRP Center Researchers from Northeastern University Featured in Nature News](#)
- [TAMU SRP Center Celebrates Launch](#)
- [Lancet Report Links Pollution to Nine Million Deaths in 2015](#)

Ramírez-Andreotta Highlighted in Citizen Science Story

University of Arizona SRP Center grantee Mónica Ramírez-Andreotta was the focus of a recent [Environmental Health Perspectives article](#) on the promise of environmental health citizen science projects. The article described citizen science efforts to democratize science by exposing a greater and more diverse section of the population to the scientific process. The story included her work as an SRP-funded doctoral student on the [Gardenroots](#) project to engage community members through citizen science about the health of their soil, water, and plants.

UNM SRP Center Featured on NPR

University of New Mexico (UNM) SRP Center grantees Matt Campen and Chris Shuey were interviewed as part of an [NPR story](#) on uranium contamination in drinking water in a Navajo community in northeastern Arizona. Shuey, who is working with Navajo communities as part of the UNM SRP Community

shapes health and influences disease. Applicants interested in studying the fundamental mechanisms of toxicity, developmental origins of health and disease, and/or environmental effects on stem/progenitor cells are particularly encouraged to apply. The Department is home to an outstanding interdepartmental NIEHS P30 Core Center and the Rochester Toxicology Training Program, as well as two clinical programs in occupational medicine. Applicants must have a Ph.D. or M.D. degree, a track record of research accomplishments, and demonstrated interest in tackling significant topics relevant to environmental health and toxicology using state-of-the-art approaches. Visit the [University of Rochester Job Opportunities website](#) for more information and to apply.

Research Scientist Position in Environmental Health - Northeastern University

A position is open for a Senior Research Scientist in environmental health to conduct and support research for centers that study exposure to environmental contamination in Puerto Rico and its contribution to adverse birth outcomes and early child development. The Senior Research Scientist will work closely with scientists from different disciplines across multiple institutions to collect and analyze large, complex environmental/ biological datasets. The Senior Research Scientist will perform basic or applied research on critical or difficult problems involving the development of new theories or methodologies. For more information and to apply, see the [full job announcement](#).

Postdoctoral Research Associate - Northeastern University

The SRP Center at Northeastern

Engagement Core, has been studying the impacts of uranium mining on the Navajo people for almost four decades. Campen is a toxicologist studying the air quality surrounding abandoned mines.

Zheng Featured in PBS NewsHour

The [PBS NewsHour](#) highlighted a recent study by the U.S. Geological Survey predicting that 2.1 million people drink from wells with arsenic at greater than 10 micrograms per liter of water, which is the maximum contaminant level allowed by the EPA. Joseph Ayotte, the lead author of the study, collaborates with Columbia SRP Center grantee Yan Zheng as part of their Community Engagement Core. Zheng, who was featured in the article, described how the team also mapped out hot spots for arsenic contamination across the country, which provides an estimate for the probability of finding arsenic in places where no one had collected data.

Karin's Work Featured in San Diego Tribune

UC San Diego SRP Center grantee Michael Karin was featured in the [San Diego Tribune](#) for his recent study in mice showing that chronic liver inflammation may promote cancer by suppressing the immune system. It had been thought that inflammation leads to cancer by directly encouraging the growth of tumor cells. However, the new study found that inflammation also suppresses immune cells that normally inspect tissues to look for signs of abnormalities and destroy abnormal cells before they can become malignant. The findings were published in the journal [Nature](#).

Stapleton's Research in Consumer Reports Article

Heather Stapleton's work as part of the Duke SRP Center was included as part of a [Consumer Reports story](#) on the potential health effects of organohalogen flame retardants. The story references a [study](#) led by Stapleton that showed that flame retardants are increasingly showing up in people's bodies, raising potential health concerns. It also highlights the Duke SRP Center Analytical Chemistry Core project, where people can submit furniture foam samples from their home for free to be analyzed for flame retardants.

Stapleton also recently provided expert scientific testimony to the Consumer Product Safety Commission (CPSC) about the health impacts of flame retardants. The commission has since voted to take steps toward banning organohalogen flame retardants (OFRs) in certain products. In the meantime, the CPSC is calling on manufacturers to voluntarily eliminate these compounds from consumer products and urging both retailers and consumers to "obtain assurances" from companies that their wares are OFR-free.

Brown and Duke SRP Centers Featured in EPA Fish and Shellfish Program Newsletter

University has an open Postdoctoral Research Associate position, which will require an experienced research scientist or engineer with a focus on environmental health and engineering, specifically on one or more of the following: health informatics, geospatial informatics, environmental epidemiology, and environmental modeling. This individual will work closely with scientists from different disciplines across multiple institutions to analyze large, complex environmental/biological datasets. Primary responsibility is ensuring that the research is complete. The appointment generally does not extend beyond two years.

The candidate must have a Ph.D. or equivalent in environmental health, computer science, epidemiology, statistics, geology, biomedical or other related quantitative fields. He/she should have advanced knowledge of modeling, analysis tools, and statistical packages. Previous experience in proposal development is strongly preferred. The ability to communicate and collaborate with a geographically dispersed group is essential. For more information, see the [full job announcement](#).

CURRENT RESEARCH BRIEF

[Research Brief 276](#): **Novel Cobamide Structure May Hold Clues for More Effective Biological Degradation of Chlorinated Compounds** (Frank Loeffler, University of Tennessee)

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

The [September 2017 issue](#) of the EPA Fish and Shellfish Program Newsletter features research and outreach activities from the Brown University and Duke University SRP Centers. In one story, the newsletter highlights the 3D fish liver model developed at the Brown SRP Center that can be used to screen chemicals for toxicity in fish. Another highlight describes the Cape Fear River Watch project, a collaboration between the Duke SRP Center Community Engagement Core and partners in southeast North Carolina on an EPA-funded Environmental Justice Collaborative Problem Solving grant that began in 2016.

Former Northeastern SRP Center Trainee Highlighted as Rising Environmental Health Leader

A Northeastern SRP Center collaborator and former SRP trainee, Kelly Ferguson, was recognized as one of [20 Pioneers Under 40 in Environmental Public Health](#) by the Collaborative on Health and the Environment. Ferguson, an epidemiologist, joined NIEHS in early 2016 to lead the Perinatal and Early Life Epidemiology Group, where she continues to research maternal exposures and preterm birth. She recently coauthored a [study](#) suggesting increased odds of preterm birth is linked to oxidative stress associated with phthalate exposures.

Stanton Interviewed for SOT Highlight

Dartmouth SRP Center Director Bruce Stanton was highlighted in the Society of Toxicology's Metals Specialty Section September 2017 newsletter. In the [article](#), Stanton describes his career as a researcher and offers advice for students. When asked about where the field of toxicology is going, he described the work of a former Dartmouth SRP Center trainee, Joe Shaw, now at Indiana University. Shaw and colleagues have developed a novel proposal to map the chemosphere, a project that will use 21st century technologies to identify all of the chemicals prevalent in our environment, how we are exposed to them, how they affect our health, and how to reduce exposure.

Duke Environment Magazine Cover Story Highlights Duke SRP Center

The Duke University SRP Center was recently featured as the [cover story](#) for the fall 2017 issue of Duke Environment magazine. The article describes the five Duke SRP Center research projects and how they are investigating the later-life consequences of early-life exposures to hazardous substances, such as polybrominated diphenyl ethers and organophosphate pesticides.

TRAINEE SPOTLIGHT

2017 SRP Annual Meeting Poster Winners

Congratulations to the four students who won the annual poster competition at the 2017 SRP Annual Meeting.

Environmental Sciences and Engineering Category:

Society of Toxicology 57th Annual Meeting and ToxExpo

March 11 - 15, 2018

San Antonio, Texas

[Website](#)

2018 Toxicology and Risk Assessment Conference

April 23 - 26, 2018

Cincinnati, Ohio

[Website](#)

3rd International Conference on One Medicine One Science

April 29 - May 2, 2018

Minneapolis, Minnesota

[Website](#)

Central and Eastern European Conference on Health and the Environment (CEECHHE)

June 10 - 14, 2018

Krakow, Poland

[Website](#)

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

- Stephanie Kim, Boston University
"Application of digital gene expression to identify adipogenic gene signatures of environmental metabolism-disrupting chemicals"
- Hongyi Wan, University of Kentucky
"Understanding the role of Fe/Pd nanoparticles in functionalized membrane systems for PCB degradation"

Health Sciences Category:

- Kelly Fader, Michigan State University
"Dioxin increases bone density in male and female mouse femurs"
- Meichen Wang, Texas A&M University
"Development of broad-acting entero-sorbents for the mitigation of Superfund chemicals and mixtures during emergencies and natural disasters"

Thanks to all trainees who presented posters and oral presentations during the meeting.

HOT PUBLICATIONS

Effect of Contaminants of Emerging Concern on Liver Mitochondrial Function in Chinook Salmon

Exposure to contaminants of emerging concern (CECs), including perfluorinated compounds, can affect both mitochondrial quality and content, according to a recent [study](#) from the University of Washington SRP Center. According to the authors, the findings support the analysis of mitochondrial function as an indicator of the sublethal effects of CECs in wild fish.

The researchers investigated mitochondrial function in juvenile Chinook salmon by exposing them to CECs in their diet and measuring liver mitochondria activity, respiration, and metabolic changes. They found elevated respiratory activity and reduced liver mitochondria content resulting from dietary exposure to a mixture of CECs. They also found that mitochondrial metabolic changes were associated with oxidative injury in liver mitochondria after dietary exposure. In addition, they looked at field-collected fish exposed to CECs in a contaminated estuary and found that they showed similar but less severe trends in mitochondrial metabolism. The results indicated that exposure to environmentally relevant mixtures of CECs affects mitochondrial function in fish.

AWARD WINNERS

Banfield Named 2017 V.M. Goldschmidt Medalist

UC Berkeley SRP Center grantee Jill Banfield was awarded the [V. M. Goldschmidt Award](#), the highest honor by the Geochemical

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.

Society. The award recognizes major achievements in geochemistry or cosmochemistry and is presented annually at the V. M. Goldschmidt Conference. An expert in environmental biogeochemistry and nanogeoscience, Banfield studies the structure and functioning of microbial communities, including their role in bioremediation, and microbial responses to climate change. Her research has helped uncover more than 1,000 new types of bacteria and archaea, helping scientists create a more accurate depiction of the tree of life.

Cordero Receives APHA's 2017 Sedgwick Memorial Medal

The Northeastern SRP PROTECT Co-Director Jose Cordero was selected to receive the 2017 [Sedgwick Memorial Medal for Distinguished Service in Public Health](#) in recognition of his public health research and mentorship achievements, as well as his lifelong effort to translate scientific findings to public health practice and policy. The Sedgwick Memorial Medal is commonly known as APHA's oldest and most prestigious award and is given to only one individual per year. Cordero was honored during [APHA's 2017 Annual Meeting and Expo](#), held November 4 - 8 in Atlanta.

Graziano Received Mid-Atlantic Society of Toxicology Ambassador Award

Columbia SRP Director Joseph Graziano is the recipient of the [Mid-Atlantic Society of Toxicology](#) 2017 Ambassador Award. This award is given annually to an individual who has advanced the understanding of the science of toxicology on a national and international basis, with special preference given to individuals who have promoted an understanding of the science to non-toxicologists.

Chang Elected to American Academy of Arts and Sciences

UC Berkeley SRP Center grantee Christopher Chang was elected to the [American Academy of Arts and Sciences](#). Chang is a faculty scientist in Lawrence Berkeley National Laboratory's Chemical Sciences Division and a UC Berkeley professor of chemistry and of molecular and cell biology. His area of research includes the fundamental design and synthesis of new molecules and materials, including artificial metalloenzymes.

Wan Awarded Second Place for AIChE Talk

University of Kentucky SRP Center trainee Hongyi (Derek) Wan won second place for his American Institute of Chemical Engineers (AIChE) Separations Division [rapid fire presentation](#) at the AIChE Annual Meeting. The presentation competition was modeled on the TED talk, which gave presenters the opportunity to pitch their work to the audience. Wan's [presentation](#) was based on his SRP-funded membrane technologies research.

CALL FOR ABSTRACTS

International Conference on One Medicine One Science

The [3rd International Conference on One Medicine One Science](#) (iCOMOS) will be held in Minneapolis, Minnesota, April 29 - May 2, 2018. iCOMOS will explore new ways to solve pressing health issues, facilitate interdisciplinary collaborations, and promote science's role in influencing public policy at the interface of humans, animals, and the environment. The conference will feature NIEHS Director Linda Birnbaum, as well as presentations by SRP Health Scientist Administrator Heather Henry, grantee Jose Cordero, and former trainee Nishad Jayasundara.

[Poster abstracts](#) are being accepted and must be submitted no later than **January 15, 2018**. A limited number of travel awards will be available for selected abstracts with preference for students and trainees.

2018 Toxicology and Risk Assessment Conference

The [2018 Toxicology and Risk Assessment Conference \(TRAC\)](#) will be a four-day meeting focusing on topics in risk assessment principles and practice. The conference provides attendees with an overview of current research, methodological, and practice issues that are the focus of risk assessment efforts in various federal agencies, academic institutions, industry, and other organizations. The theme for TRAC 2018 is "Models, Methods, and Emerging Concerns."

TRAC will feature a poster session with a trainee poster competition. The poster abstract deadline is **March 12, 2018**.

FUNDING OPPORTUNITIES

Summer Research Experiences for Students and Science Teachers

For NIEHS-funded principal investigators with R01, R21, R15, R35, R37, or P01 awards, funds are available for [administrative supplements to support summer research experiences](#) in environmental health science for high school students, college undergraduates, master's degree candidates, medical students, secondary school science teachers, and science professors from Academic Research Enhancement Award (AREA) grant eligible institutions. Administrative supplements must support work within the scope of the original project. Applications are due **January 31, 2018**.

BD2K-LINCS Summer Research Training Program

Applications are being accepted for the Big Data to Knowledge - Library of Integrated Network-Based Cellular Signatures (BD2K-LINCS) Data Coordination and Integration Center (DCIC) [2018 Summer Research Training Program in Biomedical Big Data Science](#), a research intensive ten-week training program for

undergraduate and graduate students. The [BD2K-LINCS DCIC](#) supports data science research focused on developing methods that would further extract knowledge from [LINCS data](#) by integrating those data with other relevant resources.

[Applications](#) are due **February 1, 2018**.

