



# Superfund Research Program *e-Posted Notes*

March 4, 2016 (Issue 146)

## HEADLINES

### **SRP Small Business Water Innovation - An Integrated Approach to Sustainable Solutions**

The NIEHS Superfund Research Program (SRP) is hosting a series of Progress in Research webinars to highlight SRP-funded projects around the country that support innovation in water technologies and research. The [Superfund Research Program Small Business Water Innovation - An Integrated Approach to Sustainable Solutions](#) series will feature SRP Small Business Innovation Research / Small Business Technology Transfer Research (SBIR/STTR) grantees working on new technologies for detection and remediation of hazardous substances in water, including arsenic, dioxane, and trichloroethylene and other chlorinated solvents.

- [Sustainable Approaches to Remediation](#): March 21, 1-3 pm ET
- [Innovative Detection Technologies](#): March 23, 1-3 pm ET

The webinars are free and open to the public. Each webinar will begin with a brief update of the technology followed by an open question and answer session. This format is meant to facilitate a dialogue between the small business innovators and stakeholders during the early stages of research progress - to ensure successful technology transfer and application by end users.

Please visit the [SRP Progress in Research Website](#) for more information and to register. We hope you can make it to hear about exciting SRP research!

### **SRP Trainee Gathering at SOT**

For those of you attending the Society of Toxicology (SOT) meeting this year in New Orleans, LA, there will be an informal gathering of SRP trainees at [Capdeville Restaurant](#) on **Tuesday, March 15, 7 - 9:30 pm CT**.

Please [RSVP](#) so that the SRP trainee planning group knows how many people are attending and can ensure that there will be enough space available to accommodate everyone (food and drink on your own).

## EMPLOYMENT OPPORTUNITIES

### **NIH Health Scientist Administrator**

The National Institutes of Health (NIH) [Division of Biomedical Technology, Bioinformatics, and Computational Biology](#) in the National Institute of General Medical Sciences is recruiting for a Health Scientist Administrator (Program Officer), in the Bioinformatics and Computational Biology Branch (BCB). The Division is looking for an experienced scientist to oversee and manage a portfolio of research and training grants in Bioinformatics, Biostatistics and Computational Biology. Candidates should have expertise and research experience in computational biology, bioinformatics, biostatistics, and/or data science for biomedical research. Candidates with a broad background in the application of computation for solving biological problems or expertise in two or more of the areas listed above are encouraged to apply. The position is open until **March 14, 2016**. Visit the [USAjobs page](#) for more information and to apply.

### **Tenure-Track Faculty Position – Oregon State University**

The Department of Environmental & Molecular Toxicology (EMT) in partnership with the Linus Pauling Institute at Oregon State University (OSU) seeks highly motivated applicants at the Assistant or

Informal gatherings such as these have been a great way to meet and network with other SRP trainees. Please mark your calendars!

## IN THE NEWS

### NIEHS SRP News Stories

Take a moment to read about some of our colleagues' latest activities in this month's NIEHS newsletter:

- [A key protein implicated in control of inflammation](#)

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

- [PROTECT Mobilizes to Minimize Risk of Zika Virus](#)
- [SRP Scientists Cited Among the World's Most Influential Scientific Minds](#)
- [NIEHS's Papers of the Year Include Three Manuscripts from the UCSD SRP Center](#)
- [SRP Researcher Uncovers History of Industrial Sites and Green Spaces in Providence](#)

### UNC SRP RTC Launches Eat Fish, Choose Wisely Materials

The University of North Carolina (UNC) SRP Research Translation Core launched a new [website](#) and brochure aimed at educating Triangle-area, NC residents and fishermen about local fish consumption advisories for PCBs associated with a local NPL site as well as a state-wide mercury advisory. The materials were developed over the last year after local community partners' brought concerns about fishermen potentially consuming contaminated fish from local waterways to the RTC's attention. Materials are currently available in English; translation of content into Spanish is underway.

Check out the website, [Eat Fish, Choose Wisely](#), to read more.

### Boston University SRP Training Core Sponsors Preventing the Next Flint Mini-symposium

At the February 12 mini-symposium "Preventing the Next Flint," researchers including SRP grantees, community members, and a member of the Massachusetts Water Resources Authority reflected on how water safety can go wrong scientifically, politically, and socially. The mini-symposium was sponsored by the Boston University (BU) SRP Center Training Core and focused on the effects of the crisis and the response. BU SRP Research Translation Core leader Wendy Heiger-Bernays was among the presenters. See the [BU Echo website](#) to listen to a recording of the mini-symposium or visit the [BU news page](#) to read more.

### Michael Aitken appointed to EPA Science Advisory Board's Environmental Engineering Committee

Associate Professor level to participate in the development and delivery of graduate programs and to establish an extramurally-funded research program in Environmental Health Sciences. Applicants with research programs centered on one or more of the following or closely related areas are particularly encouraged to apply: inflammation, molecular and cellular signaling, genetics, epigenetics, pharmacogenomics, carcinogenesis, cancer chemoprevention, metabolomics and systems biology or closely related areas that impact human health. Applicants at the Associate level must demonstrate a track record of sustainable extramural research funding, research productivity, leadership, and collaborative research. The position is open until **March 30, 2016**. Visit the [OSU jobs page](#) and search for posting 0016865 for more information and to apply.

### Senior Research Scientist - Northeastern University

The Northeastern University PROTECT Center is seeking a Senior Research Scientist/Engineering with experience and a focus on environmental health, specifically one or more of the following: health informatics, geospatial informatics, and environmental epidemiology. This individual will work closely with scientists from different disciplines across multiple institutions to analyze large, complex environmental/biological datasets. This position requires a Ph.D. or equivalent in Environmental Engineering, Epidemiology, Biostatistics, Geology, Biomedical or other related quantitative fields with 3-6 years of experience which includes progressively more responsible, independent research work evidenced by publications,

UNC SRP Center project leader Michael Aitken has been appointed to the EPA Science Advisory Board (SAB) Environmental Engineering Committee. The EPA SAB was established to provide independent scientific and technical peer review, consultation, advice and recommendations to the EPA Administrator on the scientific bases for EPA's actions and programs. Members of the SAB constitute a distinguished body of non-EPA scientists, engineers, economists, and behavioral and social scientists who are nationally and internationally recognized experts in their respective fields. The SAB Environmental Engineering Committee provides advice on risk management technologies to control and prevent pollution. Aitken will serve on the committee through 2018.

## **LSU SRP at the Environmental Education Symposium**

Louisiana State University (LSU) SRP Center team members gave a presentation entitled Investigations in Toxicology at the Louisiana Environmental Education Symposium on February 20, 2016. They discussed LSU SRP research and led an activity developed by the Environmental Health Sciences Center at Oregon State University. Presenters included trainees Ashlyn Harmon and Grace LeBlanc, former trainee and current staff member John Young, and Research Translation Core leader Maud Walsh. Visit the [LSU SRP Center Facebook page](#) for photos of the event.

## **SRP Papers Chosen as Favorite Chemical Research in Toxicology Articles**

At the 2015 American Chemical Society meeting in Boston, the Editorial Board of the journal Chemical Research in Toxicology (CRT) were asked to pick their favorite paper published in CRT in the past two years, which were collected in a [virtual issue](#). Among the 16 papers highlighted in the virtual issue, two SRP publications were recognized: an [article](#) from the Oregon State University SRP Center led by David Williams, and an [article](#) from the UNC SRP Center led by Jim Swenberg. See the [CRT virtual issue](#) for more information and to see the list of articles.

## **Karletta Chief Featured in Smithsonian Magazine Story on Native Americans and Climate Change**

Around the world, indigenous peoples are among the most vulnerable to the effects of climate change. In a recent story in Smithsonian Magazine, [How Will Native Americans in the Southwest Adapt to Serious Impacts of Climate Change?](#), University of Arizona SRP Community Engagement Core leader Karletta Chief discusses the effects of climate change on tribes in the southwest. Already these conditions are affecting Native American tribes in different ways, said Chief, who is also a member of the Navajo nation. A loss of soil moisture on Navajo lands in northeastern Arizona, for instance, caused sand dunes to inundate homes, she notes. The Hulapai of Arizona also had to sell much of their livestock during the most recent drought.

inventions, or equivalent efforts. See the [Northeastern University jobs page](#) for more information.

## **Several Positions in Environmental Toxicology - University of California at Riverside**

The University of California, Riverside is embarking on a major new hiring initiative that will add 300 tenure-track positions in 33 cross-disciplinary areas selected through a peer-reviewed competition. They are currently looking to fill four positions in the area of environmental toxicology at both the junior and senior levels. For more information and to submit an application, see the [UC Riverside recruitment page](#).

## **Research Scientists - Silent Spring Institute**

The Silent Spring Institute is looking for research scientists in data science and informatics, chemistry/biochemistry and biomonitoring, and molecular biology or endocrinology. They have three postings at this time for a data scientist, machine learning expert, or statistician; a chemist, chemical engineer, or biochemist; and an individual with expertise in molecular biology and endocrinology. For more information, visit the [Silent Spring Institute website](#).

## **Positions at Gradient**

Gradient is an environmental and risk sciences consulting firm renowned for their specialties in Toxicology, Epidemiology, Risk Assessment, Product Safety, Contaminant Fate and Transport, and Environmental/Forensic Chemistry. Gradient is seeking a biostatistician, epidemiologist, environmental toxicologist, toxicologist/risk assessor, environmental chemist, and

See the [Smithsonian Magazine](#) for the full story.

## Staci Simonich in the News for Research Analyzing Pesticides in Snow

Oregon State University project leader Staci Simonich has been recently quoted in the news regarding her work analyzing pesticides in snow. Simonich warns that some snow may contain long-lost pesticides, so it may not be safe to eat. See [NPR](#), [Epoch Times](#), and [Latinos Health](#) to read more. She was also featured in an article in [Orange Media Network](#) for her recent research focused on plastics, specifically polystyrene, a common plastic found in everything from appliances to red solo cups to plastic microbeads, as both a source and sink of some pollutants in aquatic environments.

## TRAINEE SPOTLIGHT

### Ivan Titaley, Oregon State University

Ivan Titaley is a doctoral student at the Oregon State University (OSU) SRP Center under the guidance of Staci Simonich. His work focuses on how to predict and detect polycyclic aromatic hydrocarbon (PAH) degradation products in the environment.

Titaley is working to predict how the PAH degradation products hydroxy- and oxygenated-PAHs form in the environment, including in Superfund sites, using a computational chemistry approach. He is combining computational and analytical chemistry to predict and detect these degradation products in variety of environmental matrices, such as in remediated soil samples. Last year, he was awarded an OSU SRP Trainee Externship Award to support a training opportunity to advance this work at the Pacific Northwest National Laboratory (Read more about his research and externship experience on the [OSU SRP website](#)). He has also performed studies to analyze a variety of PAH derivative products and assess their toxicity by combining chemical analysis and toxicological methods.

For his outstanding work, Titaley was recently chosen to receive a C. Ellen Gonter Environmental Chemistry Award by the American Chemical Society Division of Environmental Chemistry. The award is presented to graduate students who submit the highest quality research papers to the Awards Committee. As a recipient of the award, he will present his work at the ACS National

environmental engineer. Excellent analytic and critical thinking, writing, and communication skills are required. For more information, see the [Gradient jobs page](#).

## CURRENT RESEARCH BRIEF

Research Brief 255: [The Effect of Corrinoid Cofactors on Bioremediation of Chlorinated Compounds](#) (Frank Löffler, University of Tennessee) is available online.

Past [Research Briefs](#) are available on the SRP website.

To receive the monthly Research Briefs in your e-mail, please send your e-mail address to [HeacockM@niehs.nih.gov](mailto:HeacockM@niehs.nih.gov).

If you have ideas for future Research Briefs, please submit them to: [HeacockM@niehs.nih.gov](mailto:HeacockM@niehs.nih.gov).



## SRP-SUPPORTED EVENTS

### Developing a Pan American Hub for Environmentally and Socially Compatible Mining

Grantee Event: Co-Sponsored by the University of Arizona SRP

March 7, 2016

Lima, Peru

[Website](#)

### SRP Small Business Water Innovation - An Integrated Approach to Sustainable Solutions

#### Session I: Sustainable Approaches to Remediation

March 21, 2016, 1 – 3 pm ET

[Website](#)

### SRP Small Business Water Innovation - An Integrated Approach to Sustainable Solutions

#### Session II: Innovative Detection Technologies

March 23, 2016, 1 – 3 pm ET

[Website](#)

Meeting in August.

In his free time, Titaley has regularly volunteered for outreach events organized by TeamTox, an OSU environmental and molecular toxicology graduate student organization. He has done everything from teaching high school students how to extract DNA from strawberries to talking about his research to first-year undergraduate students.

Titaley grew up in Indonesia and enjoys teaching others about Indonesian culture. He also speaks both Indonesian and Javanese. Outside of the lab, he enjoys playing badminton and racquetball and is an avid basketball and soccer fan. He also has a passion for cooking (and eating!).

## HOT PUBLICATION

### Arsenite Exposure during Fetal Development and Energy Metabolism and Susceptibility to Diet-Induced Fatty Liver Disease

In a recent [paper](#) from the University of Arizona SRP Center, researchers led by Todd Camenisch found that in utero and continuous early-life exposure to arsenite disrupted normal metabolism and elevated the risk for fatty liver disease in mice maintained on a Western-style high-fat diet. Arsenite exposure during fetal development mediated disruptions in energy metabolism. Evidence for metabolic dysfunction includes altered metabolites of glycolysis as well as a disruption of the tricarboxylic acid (TCA) cycle, which is a series of chemical reactions used to generate energy from carbohydrates, fats, and proteins. This disruption was due in part to decreased isocitrate dehydrogenase enzymatic activity. Developmental arsenite exposure also increased the expression of genes involved in fatty acid synthesis, lipogenesis, inflammation, and packaging of triglycerides, suggesting an increased acetyl coenzyme A (acetyl-CoA) load. These findings suggest that individuals exposed to arsenite during key developmental periods and who remain exposed to arsenite on the background of a Western-style diet may be at increased risk for metabolic disease later in life.

## AWARD WINNERS

### Sedlak and Doyle Elected to the National Academy of Engineering

UC Berkeley SRP Center project co-leaders David Sedlak and Fiona Doyle have been elected to the prestigious National Academy of Engineering. With only 2,275 U.S. members in this group, election to the National Academy of Engineering is among the highest professional distinctions accorded to an engineer. Academy membership honors those who have made outstanding contributions to engineering research, practice, or education, including, where appropriate, significant contributions to the

### Toxicology and Risk Assessment Conference

April 4 - 7, 2016  
Cincinnati, Ohio  
[Website](#)

### Central and Eastern European Conference on Health and the Environment (CEECHE)

Grantee Event: Co-Hosted by the University of Kentucky SRP  
April 10 - 14, 2016  
Prague, Czech Republic  
[Website](#)

### Role of Aryl Hydrocarbon Receptor Polymorphisms on TCDD-mediated Suppression of Human B cell Function

Presented by Norbert Kaminski,  
Michigan State University SRP  
North Carolina Society of Toxicology Event  
April 26, 2016, 2 – 3 pm ET  
Webinar  
Registration coming soon

### NIEHS Environmental Health Science FEST

December 5 - 8, 2016  
Durham, North Carolina  
[RSVP](#)

### UPDATES FROM OTHER SRP CENTERS

The e-Posted isn't the only way you can find out about news and events from the SRP Centers. The [SRP Grantee Newsletters and Pages website](#) has links to SRP Center electronic newsletters and Facebook pages. Check it out to see the latest SRP news!

To see the latest SRP grantee publications, visit the [SRP publications page](#).

Visit the [SRP Materials for Grantees page](#) for information intended to assist grantees, such as SRP administrative supplements information, SRP best practices, NIEHS logo use, and the Data

engineering literature and to the pioneering of new and developing fields of technology, making major advancements in traditional fields of engineering, or developing/implementing innovative approaches to engineering education. Sedlak and Doyle will be formally inducted during a ceremony at the NAE's Annual Meeting in Washington, D.C. on October 9, 2016.

### **Stephanie Cormier Named Chair and Scientific Director of Asthma Research**

Congratulations to Stephanie Cormier, Director of the LSU SRP Center, who was named Plough Chair of Excellence and Scientific Director of Asthma Research at the University of Tennessee Health Sciences Center and LeBonheur Children's Hospital. Cormier's SRP research is focused on understanding the mechanism by which exposure to particulate matter from Superfund sites modulates pulmonary immune homeostasis and results in the development of asthma.

### **Lindell Ormsbee Wins ASCE Water Resources Award**

Lindell Ormsbee, the University of Kentucky SRP Center Research Translation Core Leader, has been selected by the Environmental and Water Resources Institute to receive the 2016 Julian Hinds Award. The honor recognizes significant achievements that advance engineering in the field of planning, development and management of water resources. Ormsbee is receiving the award "for pioneering research and its practical implementation in water distribution systems, watershed and stormwater management, groundwater remediation, as well as leadership in management of the nation's, and especially Kentucky's, water resources and his intellectual generosity and cheerful encouragement of others."

### **Trainee James Watt Wins Second Place Poster at Regional SOT Meeting**

At the [Northeast Regional Chapter of the Society of Toxicology](#) Fall Meeting, held at Vertex Pharmaceuticals in Boston, Boston University SRP Center trainee James Watt won second place in the graduate student poster competition. The title of his poster was "The environmental contaminant tributyltin engages the RXR and LXR nuclear receptor pathways and enhances bone formation in female C57Bl-6J mice."

### **CALL FOR ABSTRACTS**

#### **Toxicology and Risk Assessment Conference – Call for Poster Abstracts**

The 2016 Toxicology and Risk Assessment Conference (TRAC), **April 4-7, 2016 in Cincinnati, Ohio**, will focus on topics in risk assessment principles and practice. The conference provides attendees with an overview of current research, methodologic, and practice issues that are the focus of risk assessment efforts in various Federal agencies, academic institutions, industry, and

Collection Form.

The [SRP Events page](#) contains up-to-date SRP grantee and staff events.

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**

Information on NIEHS SRP Program Contacts can be found here: [NIEHS SRP Program Staff and Contacts](#).

other organizations.

A poster session on the evening of April 5, 2016 will feature trainees and is designed to provide participants the opportunity to share their work in a focused, collegial environment. The meeting organizers invite poster abstract submissions of broad interest to toxicology and risk assessment. The poster abstract deadline is **March 15, 2016**. See the [TRAC website](#) for more information.

## FUNDING OPPORTUNITIES

### EPA Now Accepting Applications for Locally-Focused EE projects

The application period for the 2016 Environmental Education (EE) Grants Program is now open. Approximately \$2.7 million of funding is available to support locally-focused EE projects that design, demonstrate, and/or disseminate EE practices, methods, or techniques. Through the EE Local Grants Request for Proposals, EPA is looking to support locally-focused EE projects that increase public awareness and knowledge about environmental issues. Projects should promote environmental stewardship and help develop informed, knowledgeable and responsible citizens in the community in which the project is located.

From this RFP, EPA expects to award up to three grants from each of the EPA's 10 Regional Offices, for approximately 30 grants nationwide. The award amount for each of these grants will be approximately, but no more than, \$91,000. Proposals are due by **April 8, 2016**. For more information, visit the [EPA website](#).

### Multiproject Center Grants Request for Applications

The NIEHS is announcing the continuation of the Superfund Hazardous Substance Research and Training Program (P42) Request for Applications (RFA) to address the broad, complex health and environmental issues that arise from the multimedia nature of hazardous waste sites. SRP Center grants support problem-based, solution-oriented research Centers that consist of multiple, integrated projects representing both the biomedical and environmental science disciplines. The Center cores are also tasked with administrative, community engagement, research translation, research support, and training functions. Letters of Intent are due on **March 11, 2016**. Applications are due on **April 11, 2016**. For more information, see the [SRP Funding Opportunities - Multiproject Center Grants page](#).

If you missed the informational webinar to answer questions about [RFA-ES-15-019](#) on December 1, 2015, the archive is available on the U.S. Environmental Protection Agency (EPA) [CLU-IN Training & Events Web page](#).

### Integrating Human Health and Well-Being with Ecosystem Service

The U.S. Environmental Protection Agency (EPA) announces the release of the [Integrating Human Health and Well-Being with Ecosystem Services](#) Request for Applications (RFA). This RFA goal is to fund community-based research that will foster better understanding of how human health and well-being are interconnected with—and depend on—ecosystem services. Specifically, this research examines how communities can integrate ecosystem services with human health and well-being to inform their decision-making and management practices. This RFA aims to develop information that allows communities to integrate environmental, societal and economic information and to better manage multiple stressors and their cumulative impacts on humans and ecosystems. The ultimate goal is to help communities achieve their own objectives while taking advantage of more relevant and accessible information about ecosystem services. Partnerships and community engagement are strongly encouraged for this research. Applications must be submitted by **April 21, 2016** for consideration. For more information, visit the [EPA website](#).

## **Research to Action Program Funding Opportunity Announcement**

Research to Action (R2A) is a program whose purpose is to bring together community members and environmental and occupational health researchers to investigate the potential health risks of environmental and occupational exposures that are of concern to the community. Data collection, translation of research into public health action, and project evaluation are all required. Learn more by visiting the [Research to Action Web page](#) and reading about current and past projects.

A new Research to Action funding opportunity will open **May 5, 2016**. This opportunity encourages applications using community-engaged research methods to investigate the potential health risks of environmental exposures of concern to the community and to implement an environmental public health action plan based on research findings. The overall goal is to support changes to prevent or reduce harmful environmental exposures and improve the health of a community. See the [Funding Opportunity Announcement](#) for more information.

## **INTERAGENCY NEWS**

### **EPA Requests for Nominations**

The U.S. Environmental Protection Agency's (EPA) invites nominations for peer reviewers for the contractor-managed, external peer review of the draft Biologically Based Dose-Response model for perchlorate in drinking water and the draft model support document. The draft model predicts changes in thyroid hormones in sensitive life stages exposed to different dietary iodide and perchlorate levels. The nomination period ends on **March 31, 2016**. For more information, see the [Federal](#)

[Register notice.](#)

The EPA also invites nominations from a diverse range of qualified candidates to be considered for appointment to its Environmental Laboratory Advisory Board (ELAB). The ELAB is a multi-stakeholder federal advisory committee that provides independent advice and recommendations to the EPA Administrator, Science Advisor, and Forum on Environmental Measurements (FEM) about cross-cutting issues related to enhancing EPA's measurement programs, and facilitating the operation and expansion of national environmental accreditation. The nomination period ends on **April 1, 2016**. For See the [Federal register notice](#) for more information.