Superfund Research Program Annual Grant Recipient Meeting Agenda

December 4 – 6, 2023

All times Mountain Standard Time

Please visit the **Technology Tables** (SRP information, SBIR demonstrations, vendors, and sponsors) located in the North Atrium, and the exhibit "EXPOSURE: Native Art - Political Ecology" in the South Atrium.

Day One – Monday, December 4, 2023

9:00 a.m. – 3:00 p.m.   **Pre-Meeting Satellite Sessions**

2:00 – 3:00 p.m.   **Pre-Meeting Check-In**

3:00 – 3:40 p.m.   **Opening Remarks –** Alvarado Ballroom
Michelle Heacock, National Institute of Environmental Health Sciences (moderator)

3:00 – 3:15 p.m.   **Rick Woychik**, National Institute of Environmental Health Sciences and National Toxicology Program

3:15 – 3:20 p.m.   **Garnett Stokes**, University of New Mexico

3:20 – 3:40 p.m.   **EXPOSURE: Integrating Research and Art to Understand a Pattern of Global Indigenous Risks**
– **Johnnye Lewis**, University of New Mexico

– **Mallery Quetawki**, University of New Mexico

– **De Haven Chaffins**, Laguna Pueblo

– **Manuela Well-Off-Man**, IAIA Museum of Contemporary Native Arts

3:40 - 4:30 p.m.   **Session One – K.C. Donnelly Externship Award Supplements – Recipient Presentations**
Brittany Trottier, National Institute of Environmental Health Sciences, and **Natalie Johnson**, Texas A & M (moderators)

Francisco Leniz, University of Kentucky – Membrane Functionalization Approaches toward Per- and Polyfluoroalkyl Substances and Selected Metal Ion Separations

Avinash Kumar, Louisiana State University – Exposure to Particulate Matter Containing Environmentally Persistent Free Radicals Affects Metabolic Signature in Neonatal Mice

Martine Mathieu-Campbell, North Carolina State University – Spatial Predictive Dispersion Modeling of Air Pollutants Concentrations Using AERMOD

Laura Dean, University of Iowa – Identification of the Cytochrome P450 Enzymes Metabolizing the Environmental Pollutant PCB 11 (3,3'-dichlorobiphenyl)

Melissa Woodward, University of Rhode Island – Application of Novel Passive Samplers for the Detection of Persistent Organic Pollutants in Indoor Air

Eric Brown Jr., University of North Carolina at Chapel Hill – Integrating Chemical Mixtures and Multi-Omic Modeling Highlights the Effects of Prenatal Mn Exposure on Reduced Gestational Age Risk in Extremely Preterm Infants

4:30 – 6:00 p.m.	**Poster Session One** – East Atrium
6:00 – 7:30 p.m.	**Networking Event – Sawmill Market**

Day Two – Tuesday, December 5, 2023

9:00 – 9:30 a.m.

Keynote Presentation – Alvarado Ballroom
Ana Navas-Acien, Columbia University (moderator)

Clifford Villa, U.S. Environmental Protection Agency

9:30 – 10:30 a.m.

Session Two – Bench to Benchside: Value of a "Center" Approach to Study Metals
Arijeet Mitra, Columbia University, and **Obinna David Nwokonkwo**, Harvard School of Public Health (moderators)

Jessy Deshane, University of Alabama – Heavy Metal Exposure Exacerbates Asthma by Induction of Innate Immune Signaling and Downstream Dysregulation of Sphingolipid Homeostasis

Jennifer Larson-Casey, University of Alabama – Mitochondrial Dysfunction Modulates Heavy Metal and Infection-Induced Lung Injury – Q&A

Tracy Zacher, Columbia University – Evaluation of a Multi-Level, Participatory Intervention to Reduce Arsenic Exposure in American Indian Communities: A Cluster Randomized Controlled Trial of the Strong Heart Water Study Program

Debra Mackenzie, University of New Mexico – Thinking Zinc: An Example of Community Partnered Interventional Clinical Trial on Navajo Nation – Q&A

Lidia Appell, University of New Mexico – Uranium-Bearing Dust Induces Expansion of Enteroendocrine Cells in Human Colonoids – Q&A

Wil Lieberman-Cribbin, Columbia University – The Association of Blood Lead With Cardiovascular Disease Incidence and Mortality in the Strong Heart Study – Q&A

10:30 – 10:45 a.m.

Break

10:45 – 11:20 a.m.

Session Three – Data to Knowledge
Javier Huayta Ramirez, Duke University, and **Prakash Dangal**, Louisiana State University (moderators)

Lauren Eaves, University of North Carolina at Chapel Hill – Climate Change, Chemical, and Social Stressors: Identifying Regions of Public Health Concern Using Geospatial Clustering

Jenny Rempel, University of California, Berkeley – Historical Redlining and Drinking Water Quality in Los Angeles, California – Q&A

Sara Gosline, Oregon State University – OSU/PNNL SRP Analytics Portal: An Automated Data Analysis Platform to Share Research Findings With Diverse Community – Q&A

Brian Johnson, Michigan State University – Combining New Approach Methodologies to Model Thyroid Hormone Synthesis, Action, and Chemical Disruption – Q&A

11:20 a.m. – 12:30 p.m. **Session Four – Reporting Back of Data**

Kevin Patterson, Columbia University, and **Sarah Schwartz**, University of California, Berkeley (moderators)

Audrey Bousquet, University of North Carolina at Chapel Hill – Identifying and Responding to Lead in Drinking Water in a University Setting

Ruby Hernandez, Texas A&M University – Soil Contamination in Houston's Ship Channel: Unveiling Hidden Health Risks in Vulnerable Communities

Nobel Hernandez-Otero, Northeastern University – Report Back and Community Engagement Addressing Post-COVID Challenges

Lyke Thompson, Wayne State University – Preliminary Results on VOCs in Homes From CEC Collaboration With Families and CLEAR Research Projects – Q&A

12:30 – 2:00 p.m. **Lunch**

2:00 – 2:40 p.m. **Karen Wetterhahn Memorial Award Presentation**
Ashley Vargas, National Institute of Environmental Health Sciences (moderator)

2:40 – 3:20 p.m. **Session Five – Future Innovation – Trainees Perspectives on Emerging Methodologies**
Breandon Taylor, University of Louisville, and **Doris Tsai**, Texas A & M University (moderators)

Sarah Black, Wayne State University – Developing Novel Ento-Phyto-Screening Methods: Detecting Environmental Chemical Contaminants Using Insect-Induced Galls – Q&A

Samantha McFall, University of Louisville – Heat Shock Proteins: Quenching the "Fire" of Benzene-Induced Endothelial Activation? – Q&A

Emily Green, Duke University – The Impact of the Microbiome in Atlantic Killifish Adaptation to Chemical Stressors – Q&A

Lindsay Volk, Massachusetts Institute of Technology – Age, Sex, and DNA Repair Capacity Modulate Susceptibility to Methylation Damage-Induced Tumorigenesis – Q&A

3:20 – 3:40 p.m. **Break**

3:40 – 4:30 p.m. **Session Six – Community Partnership and Team Science**
Irene Martinez-Morata, Columbia University, and **Christian Rude**, Oregon State University (moderators)

Alexis Slade, University of Iowa – Assessment of Polychlorinated Biphenyl Emissions From Portland Harbor Superfund Site Into the Atmosphere

Xiara Day, Texas A&M University – The Joppa Environmental Health Project: Application of a CBPR Approach to Facilitate Action-Oriented Research

Andrew George, University of North Carolina at Chapel Hill – Well Empowered: Leveraging Partnerships to Address Private Well Water Contamination in North Carolina – Q&A

Yoshira Ornelas Van Horne, Columbia University – Expanding the RETCC to Engage, Train, and Support Indigenous Youth: Launching the EARTH Program

Chrystal Galan Rivera, Northeastern University – Promoting Environmental Health Awareness: PROTECT Opportunities and Experiences – Q&A

4:30 – 6:00 p.m.　**Poster Session Two** – East Atrium

6:00 – 7:00 p.m.　**Director's Meeting** – Turquoise Room *(This meeting is intended only for the SRP P42 Center Directors, SRP R01, and SRP R25 Principal Investigators.)*

7:00 p.m.　**RT/CEC Dinner – Indian Pueblo Cultural Center** (A sign-up sheet with any additional spots will be made available during the meeting.)

Day Three – Wednesday, December 6, 2023

9:00 – 9:30 a.m.　**Keynote Presentation** – Alvarado Ballroom
Jose Manuel Cerrato, University of New Mexico (moderator)

Mark Gilfillan, U.S. Army Corps of Engineers

9:30 – 10:30 a.m.　**Session Seven – Research Translation and Commercialization of Remediation Strategies**
Benjamin Bostick, Columbia University, and **Meichen Wang**, Texas A&M University (moderators)

Richa Srivastava, University of Massachusetts – Engineering *Crambe Abyssinica* for Phytoremediation of Arsenic

Susan Perez, University of Arizona – Complexation Strength of Bioinspired Glycolipids With Ni, PB, and Zn

Alireza Farsad, Harvard T.H. Chan School of Public Health – Impregnating Amorphous Metal (Hydr)oxides Into Carbon Block for Point-of-Use Removal of Toxic Oxo-Anions from Water

Nadia Adam, Biomineral Systems LLC – Green and Sustainable In Situ Remediation of Heavy Metals Contaminated Soils and Aqueous Systems – Q&A

Sara Denison, Baylor College of Medicine – Catalytic Pyrolysis of Pyrene by Transition Metals in Clay: Mechanistic Insights and Tradeoffs With Low Treatment Temperatures

Juliana Huizenga, Oregon State University – Impact of Surfactant and Cell Immobilization on the Bioremediation and Toxicity of Polycyclic Aromatic Hydrocarbons with *Rhodoccoccus rhodochrous* ATCC 21198 – Q&A

10:30 – 10:45 a.m.　**Break**

10:45 – 11:40 a.m.　**Session Eight – Prenatal Exposures**
Jorge Moreno, University of New Mexico, and **Jin Chen**, University of Louisville (moderators)

Melissa Suter, Baylor College of Medicine – Metabolome and Exposome Wide-Association Studies of Preterm Birth and Superfund Site Proximity in Placental Samples

Annie Nguyen, Wayne State University – Gestational Benzene Exposure Leads to Sexually Dimorphic Alterations in Macrophage Populations Along the Placenta-Brain Axis

Seonyoung Park, University of Michigan – Gestational Exposure to Phthalates, Phthalate Replacements, and Their Mixture in Relation to Eicosanoid Biomarkers During Pregnancy

Francesca Macaluso, Harvard T.H. Chan School of Public Health – Community Engagement and Maternal/Child Biomonitoring for Heavy Metals Exposure in San Luis Valley, Colorado (MEMCARE-SLV) – Q&A

11:40 a.m. – 12:30 p.m.   **Session Nine – PFAS and Emerging Contaminants**

Maria Victoria Klaus, University of Kentucky, and **Rainer Lohmann**, University of Rhode Island (moderators)

Hannah Starnes, North Carolina State University – In Vitro and In Silico Methods for the Assessment of Serum Albumin Interactions With PFAS

Sarangi Joseph, North Carolina State University – Mechanisms of PFAS Sorption to Activated Carbon at Sorption Equilibrium

Shan Niu, University of Pittsburgh – Community Study on Levels and Profiles of Per- and Polyfluoroalkyl Substances in McKeesport Tap Water – Q&A

12:30 – 1:00 p.m.   **Closing Remarks and Poster Awards**
Michelle Heacock (moderator)

1:00 – 6:00 p.m.   **Site Visit Hosted by the University of New Mexico**