

**2013 Superfund Research Program Annual Meeting  
Baton Rouge, Louisiana  
October 15-17, 2013**

**Graduate Student Posters**

**1. Modeling Congener-Specific PCB Inhalation Exposure for Urban and Rural Cohorts in East Chicago, Indian and Columbus Junction, Iowa**

Authors: Matthew Ampleman, Hu D, Schulz T, DeWall J, Hornbuckle K, Thorne P  
University of Iowa  
(Non-biomedical)

**2. Application of RNA Sequencing to Detect Fusion Transcripts in Benzene-Exposed Workers**

Authors: Nicholas K. Akers, Lan Q, McHale CM, Zhang L, Thomas R, Smith M  
University of California, Berkeley  
Division of Cancer Epidemiology and Genetics, National Cancer Institute  
(Biomedical)

**3. Mediated Formation of Chlorinated Dioxins and Furans from Combustion-Generated Nanoparticle Surrogates Based on NiO, CuO, and NiO-CuO Nanoparticles Supported on Silica**

Authors: Nuwan Balapitiya, Baltrusaitis J, Dellinger B, McCarley R  
Louisiana State University  
University of Iowa  
(Non-biomedical)

**4. Ryanodine receptor activity influences polychlorinated biphenyl-induced dendritic arborization**

Authors: Christopher Barnhart, Truong K, Pessah I, Lein P  
University of California, Davis  
(Biomedical)

**5. Development and Application of Species-Specific Third Generation Ah Receptor-Based CALUX cell Lines for High-Throughput Screening**

Authors: Jennifer Brennan, He G, Tsutsumi T, Zhao J, Magiatis P, Denison M  
University of California, Davis  
National Institute of Health Sciences, Tokyo, Japan  
University of Athens, Athens, Greece  
(Biomedical)

**6. Co-Exposure to Low-Dose Model Testicular Toxicants Induces Gene Alterations**

Authors: Natasha Catlin, Huse S, Boekelheide K  
Brown University  
(Biomedical)

**7. Effects of the Electrochemical Remediation on the Permeability of Contaminated Aquifer**

Authors: Ali Ciblak, Nazari R, Alshawabkeh A  
Northeastern University  
(Non-biomedical)



**LSU**

**Superfund Research Center**

**2013 Superfund Research Program Annual Meeting**  
**Baton Rouge, Louisiana**  
**October 15-17, 2013**

**8. Analysis of Groundwater and Tap Water for Exposure Assessment of CVOCs and Phthalates**

Authors: Irmario Cotto, Padilla I, Torres P  
University of Puerto Rico  
(Non-biomedical)

**9. Exposure to Trichloroethylene Metabolites Results Increased Rates of Recombination Repair in Yeast**

Authors: Vanessa De La Rosa, Asfaha J, Fasullo M, Vulpe C  
University of California, Berkeley  
University at Albany, SUNY  
(Biomedical)

**10. Sulfate Conjugates Are Urinary Markers of Inhalation Exposure to 4-Chlorobiphenyl (PCB3)**

Authors: Kiran Dhakal, Adamcakova-Dodd A, Lehmler H, Thorne PS, Robertson LW  
University of Iowa  
(Biomedical)

**11. The Association of Mixed Prenatal Metal Exposure on Child Birth Head Circumference and Weight in Bangladesh**

Authors: Nancy Diao, Christiani DC  
Harvard University  
(Biomedical)

**12. Dietary intake and associations with cord blood Cd in two geographic areas in Bangladesh**

Authors: Christine Dobson, Rodrigues E, Kile M, Valeri L, Coull B, Christiani DC  
Harvard University  
(Biomedical)

**13. A Semi-Automated Framework for Yeast Functional Profiling of Chemical Contaminants**

Authors: Brandon D. Gaytan, Proctor M, Vulpe CD  
University of California, Berkeley  
(Biomedical)

**14. Simulating the Groundwater Conditions and Migration of Contaminant in the Vega Alta Karst Aquifer System Based on Historical Climate Data**

Authors: Reza Ghasemizadeh, Yu X, Butscher C, Hellweger F, Padilla, Alshawabkeh A  
Northeastern University  
(Non-biomedical)

**15. High Affinity Interactions between Human Transthyretin and Polychlorinated Biphenyl Sulfates - Implications for Thyroid Hormone Disruption and the Inhibition of Transthyretin Amyloidosis**

Authors: Fabian Grimm, Lehmler H, Robertson L, Duffel M  
University of Iowa  
(Biomedical)

**2013 Superfund Research Program Annual Meeting  
Baton Rouge, Louisiana  
October 15-17, 2013**

**16. Implementation of User-Friendly Features in BMEGUI version 3.0 to Model the Covariance of Superfund Surface Water Contaminants Using a River Metric**

Authors: Prahlad Jat, Akita Y, Serre ML  
University of North Carolina, Chapel Hill  
(Non-biomedical)

**17. An Isotope Dilution Method to Study the Bioavailability of DDTs and PCBs in PV Shelf Superfund Site**

Authors: Fang Jia, Crago JP, Gully J, Schlenk D, Gan J  
University California, Riverside  
(Non-biomedical)

**18. EPFR Yield Dependence on Metal Concentration**

Authors: Lucy W. Kiruri, Lomnicki S, Khachatryan L, Dellinger B  
Louisiana State University  
(Non-biomedical)

**19. TCDD-Mediated Impairment of Human Hematopoietic Stem Cells to B Cell Lineage Commitment**

Authors: Jinpeng Li, Phadnis A, Crawford R, Kaminski N  
Michigan State University  
(Biomedical)

**20. Motor, Cognitive, and Mood Dysfunction in a Manganese Exposed Community in South Africa**

Authors: Jessica Lundin, Nelson G, Searles Nielsen S, Hershey T, Checkoway H, Racette B  
University of Washington  
University Witwatersrand  
Washington University St. Louis  
(Biomedical)

**21. Human Pharmacodynamics Of An Environmentally Relevant Dosage of High Molecular Weight PAH Dibenzo (def,p) chrysene: A Biological Application For Liquid Sample Accelerator Mass Spectrometry**

Authors: Erin Madeen, McQuistan T, Ognibene T, Williams D  
Oregon State University  
(Biomedical)

**22. Structure and Global Gene Expression of Dehalococcoides Mccartyi in a TCE Dechlorinating Community within a Completely Mixed Flow Reactor**

Authors: Xinwei Mao, Stenuit B, Polasko A, Alvarez-Cohen L  
University of California, Berkeley  
(Non-biomedical)

**23. Association of Carcinogenic PAH Emissions with Lung Cancer Mortality Rates On a Global Scale**

Authors: Oleksii Motorykin, Matzke MM, Simonich SM  
Oregon State University  
(Biomedical)

**2013 Superfund Research Program Annual Meeting**  
**Baton Rouge, Louisiana**  
**October 15-17, 2013**

**24. Simultaneous Determination of Parent and Hydroxylated PAHS in Urine and PM2.5 Personal Air Samples C**

Authors: Oleksii Motorykin, Schrlau J, Simonich SM  
Organ State University  
(Non-biomedical)

**25. A New Role for Exercise: Examining the Effects of Physical Activity on Polychlorinated Biphenyl-Induced Cardiovascular Disease**

Authors: Margaret Murphy, Eske K, Petriello M, Newsome B, Hennig B, Morris A  
University of Kentucky  
(Biomedical)

**26. Gas phase Initiated Formation and Characterization of Environmentally Persistent Free Radicals(EPFRs) in Cation Exchanged Smectite Clays**

Authors: Ugwumsinachi Godwin Nwosu, Dela Cruz A, Dellinger B, Cook R  
Louisiana State University  
(Non-biomedical)

**27. Linking Environmental Geochemistry with Bioaccessibility and Human Health Risks of Metals in Soils – A Combination of Spiked Soil, Field Soil and Column Methods**

Authors: Yongmei Shen, Shdo S, Estes E, Zota A  
Harvard University  
Woods Hole Oceanographic Institution  
(Non-biomedical)

**28. Arsenic In-Situ Immobilization by Magnetite Formation within Contaminated Aquifer Sediments**

Authors: Jing Sun, Chillrud S, Mailloux B, Bostick B  
Columbia University  
(Non-biomedical)

**29. Characterization of Recombinant PON1 Variants from an E. coli System**

Authors: Stephanie Suzuki, Vu Y, Stevens R, Cole T, Richter R, Furlong C  
University of Washington  
Merck Research Laboratories Boston  
(Biomedical)

**30. Hypoxia perturbs Ah Receptor Signaling and CYP1A1 Expression Induced by PCB 126 in Human Cells**

Authors: Sabine U. Vorrink, Severson PL, Futscher BW, Domann FE  
The University of Iowa  
The University of Arizona  
(Biomedical)

**31. Effects of Cadmium on Olfactory Mediated Behaviors and Molecular Biomarkers in Coho Salmon**

Authors: Chase Williams, Gallagher E  
University of Washington  
(Biomedical)

**2013 Superfund Research Program Annual Meeting**  
**Baton Rouge, Louisiana**  
**October 15-17, 2013**

**32. Selenoprotein P regulates 1-(4-Chlorophenyl)-benzo-2,5-Quinone Induced Oxidative Stress and Toxicity**

Authors: Wusheng Xiao, Yueming Z, Prabhat G

The University of Iowa

(Biomedical)

**33. Preventing cadmium Accumulation in Rice Grains: Investigating Strategies for Food Safety**

Authors: Qingqing Xie; Andrew Copper; Timothy O. Jobe; Julian Schroeder

University of California, San Diego

(Non-biomedical)

**34. Sperm mRNA Transcripts are Sensitive Indicators of Germ Cell Toxicity in Rats**

Authors: Linnea Anderson, Dere E, Huse S, Boekelheide K

Brown University

(Biomedical)

**35. Identification and Quantitation of Putative Toxic Polycyclic Aromatic Hydrocarbon (PAH) Transformation Products in Bioremediated Manufactured Gas Plant Soils**

Authors: Leah Chibwe, Nakamura J, Michael D, Hoh E, Simonich S

Oregon State University

UNC Chapel Hill

San Diego State University

(Non-biomedical)

**36. Mycoremediation: An Innovative Remediation Technology to Treat PAHs under Harsh Environmental Conditions**

Authors: Lauren M. Czaplicki, Gunsch CK

Duke University

(Non-biomedical)

**37. In Utero and Chronic Low-dose As (III) Induction of NAFLD and Altered Energy Metabolism**

Authors: Eric Ditzel, Nguyen H, Parker P, Camenisch T

University of Arizona

(Biomedical)

**38. Combining Bioavailability Assays with Modeling to Predict PCBs in Fish after Remediation**

Authors: Hilda Fadaei -Khoei

University of Maryland, Baltimore County

(Non-biomedical)

**39. Hydrodechlorination of TCE by Pd and H<sub>2</sub> Produced from a Copper Foam Cathode in a High-Flow Electrolytic Column**

Authors: Noushin Fallahpour, Yuan S, Alshawabkeh AN

Northeastern University

(Non-biomedical)

**2013 Superfund Research Program Annual Meeting**  
**Baton Rouge, Louisiana**  
**October 15-17, 2013**

**40. Characterization of Fly Ashes from Different Incineration Facilities in China**

Authors: Elisabeth Feld, Lomnicki S  
Louisiana State University  
(Non-biomedical)

**41. Urinary phthalate Metabolites are Associated with Increased Inflammation and Oxidative Stress Biomarkers During Pregnancy in Puerto Rico**

Authors: Kelly K. Ferguson, Cantonwine DE, Rivera-González LO, Anzalota Del Toro LV, Crespo-Hernández N Mukherjee B, Jiménez-Vélez B, Loch-Carusio R, Alshawabkeh AN, Cordero JF, Meeker JD  
University of Michigan  
PROTECT  
(Biomedical)

**42. PCB126 Alters Adipogenesis and Induces Metabolic Disruption in a Human Adipocyte Model**

Authors: Gopi S Gadupudi, Gourronc F, Klingelhutz AJ, Robertson LW  
University of Iowa  
(Biomedical)

**43. Elevated Blood Lead Concentrations among Children in Rural Bangladesh**

Authors: Kelsey Gleason, Claus Henn B, Quamruzzaman Q, Christiani D, Mazumdar M, Wright R  
Harvard University  
(Biomedical)

**44. Chloro-Organic Detoxification by Membrane Supported Iron-Iron Oxide System**

Authors: Minghui Gui, Ormsbee L, Bhattacharyya D  
University of Kentucky  
(Non-biomedical)

**45. Rodent-based Toxicogenomic Models of Hepatocarcinogenicity**

Authors: Daniel Gusenleitner, Auerbach S, Sherr D, Monti S  
Boston University  
National Institute of Environmental Health Sciences  
(Biomedical)

**46. On/Off Binding of Persistent Organic Pollutants Using Magnetic Nanocomposite Microparticles**

Authors: Angela M. Gutierrez, Newsome BJ, Dziubla TD, Hilt JZ  
University of Kentucky  
(Non-biomedical)

**47. Use of Native Plants to Efficiently and Cost Effectively Stabilize Arsenic in Iron Sulfide Mine Tail**

Authors: Corin Hammond, Root R, White S, Scott W, Maier R, Chorover J  
University of Arizona  
(Non-biomedical)



**LSU**

**Superfund Research Center**

**2013 Superfund Research Program Annual Meeting**  
**Baton Rouge, Louisiana**  
**October 15-17, 2013**

**48. Dechlorination of Trichloroethylene in Water by Membrane-Supported Fe/Pd Nanoparticles Synthesized in PAA Hydrogel from Redox Polymerization**

Authors: Sebastian Hernandez Sierra, Bhattacharyya D  
University of Kentucky  
(Non-biomedical)

**49. Environmentally Persistent Free Radical (EPFR) Formation in a Model Combustion System**

Authors: M. Paul Herring, Khachatryan L, Lomnicki S, Dellinger B  
Louisiana State University  
(Non-biomedical)

**50. Sensing Environmental Contaminants with Paper-Based Platforms**

Authors: Leslie Knecht, Anderson H, Sharma B, Raut N, Pasini P, Deo S  
University of Miami  
The University of the South  
(Non-biomedical)

**51. Human B Cell line Model for Elucidating the Role of the Aryl Hydrocarbon Receptor in TCDD-Mediated I**

Authors: Natalia Kovalova, Maria M, Robert C, Norbert K  
Michigan State University  
(Biomedical)

**52. Increases in Metallothionein Expression Caused by PCB126 are Linked to Species Sensitivity and are Potentially Mediated through the AhR**

Authors: William Klaren, Robertson LW  
University of Iowa  
(Biomedical)

**53. Hazardous PCBs Concentration in Guánica Bay: Invisible Community**

Authors: Naresh Kumar, Fetterhoff S, Carrasquillo O, Szapocznik J, Treaster J, Toborek M  
University of Miami  
(Non-biomedical)

**54. BEAR Pregnancy Cohort: Arsenic Methylation Linked to Poorer Birth Outcomes**

Authors: Jessica E. Laine, Bailey K, Rubio-Andrade, Stýblo M, Garcia-Vargas G, Fry R  
University of North Carolina, Chapel Hill  
Universidad Juarez del Estado de Du  
Universidad Juarez del Esta  
(Biomedical)

**55. Role of Cyp1b1 in Potency of PAH Initiated Tumor Incidence in a Mouse Skin Tumor Model**

Authors: Andrew Larkin, Siddens B, Lohr C, Krueger S, Baird W, Williams D  
Oregon State University  
(Biomedical)

**2013 Superfund Research Program Annual Meeting**  
**Baton Rouge, Louisiana**  
**October 15-17, 2013**

**56. A Mathematical Model Elucidates the Arsenic Methylation Pathway**

Authors: Sean Lawley, Yun J, Hall M, Gamble M, Nijhout F, Reed M

Duke University

Columbia University

(Biomedical)

**57. Effects of Environmentally Persistent Free Radicals on Severity of Neonatal Influenza Infection**

Authors: Greg Lee, Saravia J, You D, Cormier S

Louisiana State University

(Biomedical)

**58. Biological Off-Target Discovery of Environmental Toxicants**

Authors: Daniel Medina-Cleghorn, Morris, PJ, Nomura, DK

University of California, Berkeley

(Biomedical)

**59. Functionalized Magnetic Nanoparticles for On/Off Binding of Persistent Organic Pollutants from Water Sources**

Authors: Bradley J. Newsome, Gutiérrez A, Hennig B, Hilt JZ, DziublaT

University of Kentucky

(Non-biomedical)

**60. Chronic arsenic Exposure and Global 5-Methylcytosine and 5-Hydroxymethylcytosine Levels of Peripheral Blood Leukocyte DNA in Folate-Deficient Bangladeshi Adults**

Authors: Megan Niedzwiecki, Hall M, Liu X, van Geen A, Graziano J, Gamble M

Columbia University

(Biomedical)

**61. The Role of Endogenous and Environmental AhR Ligands in Mammary Epithelial Cell Tumor Growth and Metastasis**

Authors: Olga Novikov, Sherr, DH

Boston University

(Biomedical)

**62. Biotransformation and Microbial Toxicity of 2,4-Dinitroanisole (DNAN)**

Authors: Christopher Olivares; James Field

University of Arizona

(Non-biomedical)

**63. Behavioral Impairment Caused by Acute Exposure to Firemaster® 550 in Adult Zebrafish**

Authors: Anthony Oliveri, Bailey J, Stapleton H, Levin E

Duke University

(Biomedical)



**2013 Superfund Research Program Annual Meeting**  
**Baton Rouge, Louisiana**  
**October 15-17, 2013**

**64. Arsenic metabolism and renal function in an arsenic-exposed population in Bangladesh**

Authors: Brandilyn Peters, Liu X, Hall MN, Neugut, YD, Pilsner, Gamble MV  
Columbia University  
University of Massachusetts  
(Biomedical)

**65. Effects of Triclocarban (TCC) on Cytokine and Pulmonary Inflammation**

Authors: Alexandra Pietrzyk, Olsen N, Fu M, Venkataraman M, Gee N, Vogel CF, Pinkerton KE, Lasley WL  
University of California, Davis  
(Biomedical)

**66. Alumina's and Aluminosilicate's Role in PCDD/F Formation**

Authors: Phillip M. Potter, Lomnicki S, Dellinger B  
Louisiana State University  
(Non-biomedical)

**67. EPFR Yields of Ambient PM2.5 Dosed with Phenol**

Authors: Cholena Ren, Dellinger B, Slawomir L  
Louisiana State University  
(Non-biomedical)

**68. Sulfated Metabolites of Polychlorinated Biphenyls Selectively Bind to the Major Drug-Binding Sites In Human Serum Albumin**

Authors: Eric A Rodriguez, Duffel, MW, Lehmler, HJ, Robertson, LW,  
The University of Iowa  
(Biomedical)

**69. Comparing Results in the U.S. EPA Vapor Intrusion Database to Computational Fluid Dynamics Modeling Predictions**

Authors: Rui Shen, Yao Y, Pennell KG, SuubergEM  
Brown University  
(Non-biomedical)

**70. Crab Burrows Deliver Reactive Water to Aquifers in Bangladesh**

Authors: Mason Stahl, Badruzzaman, ABM, Tarek MH, Yeo D, Harvey C  
Harvard University  
Massachusetts Institute of Technology  
Bangladesh University of Engineering and Technology  
National University of Singapore  
(Non-biomedical)

**71. Assessing Contaminant Bioavailability Using the In Situ Sampler for Bioavailability (IS2B)**

Authors: Samuel D Supowit, Dang, VD, Kroll, KJ, Denslow ND, Roll IB, Halden RU  
Arizona State University  
(Non-biomedical)

**2013 Superfund Research Program Annual Meeting  
Baton Rouge, Louisiana  
October 15-17, 2013**

**72. Chemisorption of Phenol on ZnO(10-10) Surface: XPS and EELS Studies**

Authors: Chad A. Thibodeaux, Patterson MC, Kizilkaya O, Kurtz RL, Sprunger PT, Poliakoff ED  
Louisiana State University  
(Non-biomedical)

**73. New Insights into the Molecular Mechanisms of Lead Neurotoxicity**

Authors: Peter Wagner, Hofmann O, Guilarte T, Christiani D, Lu Q  
Harvard University  
Columbia University  
(Biomedical)

**74. Biological and Environmental Transformations of Copper-Based Nanomaterials**

Authors: Zhongying Wang; Hurt RH  
Brown University  
(Non-biomedical)

**75. Emerging Toxicants Induce Adipogenesis and Suppress Osteogenesis in Mesenchymal Stromal Cells**

Authors: James Watt, Webster T, Schlezinger J  
Boston University  
(Biomedical)

**76. Geochemical and Multiple-Metal Toxicological Analysis of Acid Mine Drainage Entering the North Fork of Clear Creek, Colorado**

Authors: Jacob L. Williamson, Ranville, JF, Traudt EM, Meyer JS, Pastorinho MR, Clements W  
ARCADIS  
Colorado State University  
Colorado School of Mines  
University of Aveiro  
(Non-biomedical)

**77. Whole-Cell Based Biosensing of Hydroxylated Polychlorinated Biphenyls**

Authors: Daniel Wynn, Pasini P, Deo S, Daunert S  
University of Miami  
(Non-biomedical)

**78. Temperature Responsive Membranes Immobilized Nanoparticles for Remediation**

Authors: Li Xiao; Waldrop K, Bhattacharyya D  
University of Kentucky  
(Non-biomedical)

**79. Time-Course Analysis of Trichloroethylene Metabolism and its Association with Subchronic Toxicity in Liver**

Authors: Hong Sik Yoo, Collins L, Uehara T, Kobets T, Kosyk O, Bradford B  
University of North Carolina at Chapel Hill  
(Biomedical)