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Sara Hearon, Ph.D., M.P.H.

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Professional Profile

Dr. Hearon is a toxicologist with an interdisciplinary background in biomedical sciences, public health, and environmental and regulatory toxicology. Her doctoral thesis focused on the development of a novel soil remediation technique using in vitro efficacy and *in vivo* safety testing.

Dr. Hearon studied the fate and transport of contaminants in the environment and has worked on reducing the bioavailability of contaminants from soil, specifically glyphosate, perfluorooctanoic acid (PFOA), and perfluorooctanesulfonic acid (PFOS). Dr. Hearon has 4 years of laboratory research experience and is skilled in analytical chemistry techniques including HPLC, LC-MS, and ICP-MS.

Prior to joining Exponent, Dr. Hearon earned both her Ph.D. in Toxicology and M.P.H in Environmental Health from Texas A&M University. As a research associate in the Texas A&M Superfund Center, she gained experience with developing mitigation strategies to protect vulnerable populations from disaster-related exposures. During her doctoral research, she also had the opportunity to work on product development research for a nutritional animal feed additive to address mycotoxins that is now on the market. Dr. Hearon worked as a research intern at the Texas Department of State Health Services in the Chemical Threat Analysis lab, where she completed an ICP-MS clinical method validation study. As part of her master's work, she conducted an environmental risk assessment of a Kenyan village and designed and constructed a community waste management project and sustainable housing for a family of five. Dr. Hearon has presented her work at various regional and national conferences, published in peer-reviewed scientific journals, and is an active member of both the Society of Toxicology and the Society of Environmental Toxicology and Chemistry.

Academic Credentials & Professional Honors

Ph.D., Toxicology, Texas A&M University, 2021

M.P.H., Environmental Health, Texas A&M University, 2017

B.S., BIOMEDICAL SCIENCE, Texas A&M University, 2015

Research Intern, Texas Department of State Health Services (DSHS) Chemical Threat Laboratory, 2018

National Institute of Environmental Health Sciences Superfund Research Program Trainee, 2018-2021

National Institute of Health T32 Trainee Fellowship, 2017

Prior Experience

Laboratory Manager, Albion Environmental, 2014 - 2017

Professional Affiliations

Society of Toxicology (SOT) – 2018 to present

Society of Environmental Toxicology and Chemistry (SETAC) – 2019 to present

Publications

Wang, M., A. A. Orr, J. M. Jakubowski, K. E. Bird, C. M. Casey, S. E. Hearon, P. Tamamis and T. D. Phillips (2021). Enhanced adsorption of per- and polyfluoroalkyl substances (PFAS) by edible, nutrient-amended montmorillonite clays. Water Research 188: 116534.

Hearon, S. E., M. Wang, T. J. McDonald and T. D. Phillips (2021). Decreased bioavailability of aminomethylphosphonic acid (AMPA) in genetically modified corn with activated carbon or calcium montmorillonite clay inclusion in soil. Journal of Environmental Sciences 100: 131-143.

Wang, M., S. E. Hearon and T. D. Phillips (2020). A high capacity bentonite clay for the sorption of aflatoxins. Food Additives & Contaminants: Part A 37(2): 332-341.

Orr, A. A., S. He, M. Wang, A. Goodall, S. E. Hearon, T. D. Phillips and P. Tamamis (2020). Insights into the interactions of bisphenol and phthalate compounds with unamended and carnitine-amended montmorillonite clays. Computers & Chemical Engineering 143: 107063

Hearon, S. E., M. Wang and T. D. Phillips (2020). Strong Adsorption of Dieldrin by Parent and Processed Montmorillonite Clays. Environmental Toxicology and Chemistry 39(3): 517-525.

Wang, M., S. Safe, S. E. Hearon and T. D. Phillips (2019). Strong adsorption of Polychlorinated Biphenyls by processed montmorillonite clays: Potential applications as toxin enterosorbents during disasters and floods. Environmental Pollution 255: 113210.

Wang, M., S. E. Hearon and T. D. Phillips (2019). Development of enterosorbents that can be added to food and water to reduce toxin exposures during disasters. Journal of Environmental Science and Health, Part B 54(6): 514-524.

Wang, M., S. E. Hearon, N. M. Johnson and T. D. Phillips (2019). Development of broad-acting clays for the tight adsorption of benzo[a]pyrene and aldicarb. Applied Clay Science 168: 196-202.

Phillips, T. D., M. Wang, S. E. Elmore, S. Hearon and J.-S. Wang (2019). NovaSil Clay for the Protection of Humans and Animals from Aflatoxins and Other Contaminants. Clays and Clay Minerals 67(1): 99-110.

Presentations

Hearon SH, Orr AA, Wang M, Tamamis P, Phillips TD. Reduction of per- and polyfluoroalkyl substance (PFAS) bioavailability from soil and translocation to plants with parent and modified montmorillonite clays. Poster presentation, Society of Toxicology Annual Meeting, Virtual, 2021.

Hearon SH, Wang M, Phillips TD. Reduction of the bioavailability of PFAS (per- and polyfluoroalkyl substances) from soil and their translocation to plants in the presence of parent and amended montmorillonite clays. Poster presentation, Superfund Research Program Annual Meeting, Virtual, 2020.

Hearon SH, Wang M, Phillips TD. Carbonaceous and Clay-Based Sorbents Can Reduce Chemical Bioavailability From Soil and Translocation to Plants. Platform presentation, Society of Environmental

Toxicology and Chemistry North America 41st Annual Meeting, Virtual, 2020.

Hearon SH, Wang M, Phillips TD. Development of Soil Amendments to Reduce Exposures to Hazardous Environmental Contaminants. Seminar presentation, Texas A&M Toxicology Fall Seminar Series, College Station, TX, 2020.

Hearon SH, Wang M, Phillips TD. Reduction of AMPA bioavailability with biochar and calcium montmorillonite clay. Platform presentation, Society of Toxicology Annual Meeting: Texas Edition, Virtual, 2020.

Hearon SH, Wang M, Phillips TD. Reduction of pesticide bioavailability with biochar and clay-based sorbents. Platform presentation, Society of Environmental Toxicology and Chemistry, Young Environmental Scientists Meeting, Waco, TX, 2020.

Hearon SH, Wang M, Phillips TD. Montmorillonite clays can be used to reduce pesticide bioavailability in soil. Poster presentation, Superfund Research Program Annual Meeting, Seattle, WA, 2019.

Hearon SH, Wang M, Phillips TD. Reduction of Pesticide Bioavailability with Charcoal and Clay-Based Sorbents. Poster presentation, Lone Star Society of Toxicology Annual Meeting, Galveston, TX, 2019.

Hearon SH, Wang M, Phillips TD. Strong Adsorption of Environmental Chemicals by Charcoal and Clay-Based Sorbents. Seminar presentation, Texas A&M Toxicology Fall Seminar Series, College Station, TX, 2019.

Hearon SH, Wang M, Phillips TD. Strong Adsorption of Dieldrin by Charcoal and Clay-Based Sorbents. Poster presentation, Texas A&M Annual Toxicology and Regulatory Science Symposium, College Station, TX, 2019.

Hearon SH, Wang M, Phillips TD. Variable Binding Capacities for Activated Charcoals from Different Sources” Poster presentation, Society of Toxicology Annual Meeting. Baltimore, MD, 2019.

Hearon SH, Wang M, Phillips TD. Activated Charcoal as a Broad-Acting Sorbent for Endocrine Disrupting Chemicals. Poster presentation, College of Veterinary Medicine Research Symposium, College Station, TX, 2019.

Hearon SH, Hamilton K, Hover-Jeansonne J. Validation of an ICP-MS Clinical Method for Determination of Multiple Toxic Elements in Urine. Poster presentation, Lone Star Society of Toxicology Annual Meeting, Austin, TX, 2018.