

Kimberly K. Garrett
PhD, MPH

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(she/they)

Education

December 2021	Doctor of Philosophy in Environmental and Occupational Health University of Pittsburgh, Pittsburgh, PA Advisor: Dr. Jim Peterson Dissertation: <i>Potential Antidotes to Phosphine Poisoning</i>
May 2017	Master of Public Health in Environmental and Occupational Health with Certificate in Environmental Health Risk Assessment University of Pittsburgh, Pittsburgh, PA Thesis: <i>The Effect of Climate Change on the Risk of Anthrax Infection in the Kobuk Valley, Alaska</i>
January 2015	Bachelor of Science in Environmental Science Allegheny College, Meadville, PA Minor in Women's Studies Senior Thesis: <i>A Quest for Estrogen: Searching for 17α-Ethinylestradiol in the French Creek Watershed</i>

Professional & Research Experience

March 2022 - Current	Social Science Environmental Health Research Institute PFAS Project Lab, Northeastern University, Boston, MA Postdoctoral Research Associate Supervisor: Dr. Phil Brown Works at the intersection of social and environmental science to assess and address PFAS contamination, studying multi-scalar governance, community activism, and environmental justice, and modeling exposures. Contributes to NSF and NIEHS funded projects including PFAS-REACH in collaboration with the Silent Spring Institute Organizes NIEHS funded webinar series to introduce researchers to applications and ethical considerations of emerging technology including artificial intelligence and machine learning.
October 2016 – September 2021	Department of Environmental and Occupational Health University of Pittsburgh Graduate School of Public Health, Pittsburgh, PA Graduate Student Researcher Supervisor: Dr. Jim Peterson

November 2016 – April 2017	Identified transition-metal based candidate antidotes to mitochondrial inhibitors including phosphine, cyanide, and azide, designed inhalational exposure protocols for mice and insect models, and assessed the impacts of phosphine on hemoglobin
	Methods: UV/VIS electronic absorption, stopped-flow, FTIR and, EPR spectroscopy, high-resolution respirometry, anaerobic environments
	Completed summer research rotation studying the impacts of trivalent arsenic on myoblast formation and assessed an insect model for As(III) toxicity screening.
	Allegheny County Health Department Department of Epidemiology and Biostatistics, Pittsburgh, PA Intern
August 2016 – March 2017	Conducted county-wide Lyme disease surveillance, classified case reports, and maintained PA-NEDSS records.
	Department of Decision Science Carnegie Mellon University, Pittsburgh, PA Research Assistant Prevention Options for Women Evaluation Research (POWER) Project
January – August 2015	Designed and analyzed behavioral health surveys studying attitudes, behaviors, and knowledge of HIV prevention in young people in Kenya and South Africa.
	Meadville Community Wellness Initiative Allegheny College, Meadville, PA Research Assistant
May – September 2014	Designed and disseminated behavioral and environmental health surveys for seventh and fifth grade students, assessed community food, transportation, and recreation access based on results
	Shenango River Watchers Sharon, PA Intern
	Managed administrative office of conservation nonprofit, designed communication materials and organized fundraising events

Publications

Accepted	Garrett, K. K. , Brown, P., Varshavsky, J., & Corder, A. (2022). Improving Governance of “Forever Chemicals” in the US and Beyond. <i>OneEarth</i> .
Published	Salvatore, D., Mok, K., Garrett, K. K. , Poudrier, G., Brown, P., Birnbaum, L., Goldenman, G., Miller, M., Patton, S., Poehlein, M., Varshavsky, J., & Corder, A.

(2022). Presumptive Contamination: A New Approach to PFAS Contamination Based on Likely Sources. *Environmental Science & Technology Letters*.

Published **Garrett, K. K.**, Frawley, K. L., Totoni, S. C., Bae, Y., Peterson, J., & Pearce, L. L. (2019). The Antidotal Action of Some Gold (I) Complexes Toward Phosphine Toxicity. *Chemical Research in Toxicology* 32 (6), 1310-1316

Published Praekunatham, H., **Garrett, K. K.**, Bae, Y., Cronican, A. A., Frawley, K. L., Peterson, J., & Pearce, L. L. (2019). A Cobalt Schiff-Base Complex as a Putative Therapeutic for Azide Poisoning. *Chemical Research in Toxicology* 33 (2), 333-342

Presentations

June 2022 Poster	<p>“Presumptive Contamination: A New Approach to PFAS Contamination Based on Likely Sources”</p> <p><i>Third National PFAS Meeting: Highly Fluorinated Compounds – Environmental Justice and Scientific Discovery</i></p> <p>Wilmington, NC</p>
October 2020 Talk	<p>“Tear Gas is a Chemical Weapon: The Toxicology of State Violence”</p> <p><i>Pitt Graduate Student Organizing Committee Science and Society Lecture Series</i></p> <p>University of Pittsburgh, Pittsburgh, PA</p>
May 2019 Poster	<p>“The Antidotal Action of Some Gold(I) Compounds against Phosphine Toxicity”</p> <p><i>Annual Allegheny-Erie Society of Toxicology Meeting</i></p> <p>Pittsburgh, PA</p>
June 2017 Poster	<p>“Cobalt Schiff-base Macrocycles as Antidotes to Azide Poisoning”</p> <p><i>NIH Countermeasures Against Chemical Threats</i></p> <p>Boston, MA</p>
January 2015 Talk	<p>“Assessing 7th Graders’ Knowledge, Behavior, and Attitudes toward Physical Activity, Nutrition, and Local Foods”</p> <p><i>Penn State University Undergraduate Research Conference</i></p> <p>Erie, PA</p> <p>Awarded Second Place in Session</p>

October 2014 Poster	“Perceptions of Risk of <i>in Utero</i> Exposure to Bisphenol A” <i>Prenatal Programming and Toxicity IV</i> Boston, MA
March 2014 Talk	“Epigenetics: Policing the Pregnant in Fear of the Future” <i>Democracy Realized? The Legacy of the Civil Rights Movement</i> Meadville, PA

Additional Research Projects (Unpublished & In Progress)

Pending Publication 2021	Silver (I) and Cobalt (II) Compounds as Phosphine Antidotes: Results from Mouse and Insect Models University of Pittsburgh Department of Environmental and Occupational Health Multifaceted investigation of phosphine’s impacts on cytochrome c oxidase, hemoglobin, and radical oxygen species production, and screening of transition-metal based candidate antidotes.
Pending Publication 2021	A Potential Antidote for Both Azide and Cyanide University of Pittsburgh Department of Environmental and Occupational Health Antidote screening and mechanistic investigation of a Co (II/III) compound found to ameliorate both azide and cyanide toxicity in mouse and insect models.
Thesis 2017	The Effect of Climate Change on Risk of Anthrax Infection in the Kobuk Valley, Alaska University of Pittsburgh Department of Environmental and Occupational Health Master’s thesis, environmental risk assessment of anthrax outbreaks mediated by permafrost melt and potential impacts on indigenous communities and subsistence farmers
Unpublished 2016	Environmental Risk Factors and Lyme Disease in Pennsylvania: A Geospatial Approach University of Pittsburgh Department of Behavioral and Community Health Sciences GIS-based risk assessment and identification of environmental influences on PA Lyme disease incidence including vector population management.
Thesis 2014	A Quest for Estrogen: Searching for 17α-Ethinylestradiol in the French Creek Watershed Allegheny College Senior undergraduate thesis, interdisciplinary research incorporating environmental science, toxicology, and gender studies. Surface water sampling for synthetic estrogens based on anticipated risk.

Service & Extracurriculars

April 2022	Three Rivers Outdoor Company Pittsburgh, PA Birdwatching guide
July 2021	“Meet Pittsburgh’s pigeon whisperer: Kim Garrett” Feature by Dani Janae, Pittsburgh City Paper
October 2019 – March 2020	The National Aviary Pittsburgh, PA Volunteer Docent
June 2018 – December 2021	University of Pittsburgh Graduate Student Organizing Committee Pittsburgh, PA Student Organizer

Skills Inventory

Toxicology Research	Dose-response assessment Inhalational exposure modeling Environmental risk assessment
Spectroscopy	Electronic absorption (UV/VIS) Stopped flow Electronic paramagnetic resonance (EPR) Infrared (FTIR)
Assays	ELISA HRP/Amplex Red Total coliform assessments
Animal Models	Greater wax moth, <i>Galleria mellonella</i> African clawed frog, <i>Xenopus laevis</i> Mouse, <i>Mus musculus</i>
Cell Culture	C2C12 myoblasts
Other Laboratory	High-resolution respirometry (Orobrox) Mitochondrial protein isolation Chemical synthesis Anaerobic atmospheres (glovebox, Schlenk line) Hazardous material handling, bloodborne pathogen and chemical safety

Field Research	Sampling design and collection (quadrating, surface water sampling, soil coring) Macroinvertebrate assessment
Computer Skills	Mapping: ArcGIS, QGIS, GeoDa Data analysis: STATA, Graph Pad Prism, Kaliedagraph, Excel Qualitative analysis: DeDoose Website management: Wordpress Microsoft Office and Google suite
Qualitative Methods	Survey design and analysis