

CURRICULUM VITAE

Marie Bourgeois, PhD, MPH

Health, Associate Professor
Director of Health, Safety and Environment Program, SERC
Center for Environmental/Occupational Risk Analysis and Management
Global, Environmental, and Genomic Health Sciences
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As a Health Associate Professor at the USF College of Public, my annual assignment is divided between course development/instruction and research. My primary work is instructional related where I design and teach undergraduate and graduate courses in the College focusing on toxicology, life cycle inventory/assessment, environmental fate and effects, sustainable and green chemistry, as well as, general environmental health, safety and wellness. I coordinate outreach and service projects for undergraduate students interested in service learning across the USF system and throughout Central Florida.

I conduct primary toxicology research and human health, environmental, and occupational exposure/risk assessments. I design studies evaluating the adverse effects of industrial chemicals, environmental chemicals and licit/illicit drugs using *in silico*, *in vivo* and *in vitro* models. I characterize risk in stakeholder-appropriate language to explain hazards, risk and scientific uncertainties in scientific, regulatory and public settings. In addition, I design undergraduate and graduate research projects at the College of Public Health.

Professional Preparation

University of South Florida	Clinical Chem	BS	1991
University of South Florida College of Public Health	Toxicology	MPH	2006
University of South Florida College of Public Health	Tox/Risk Asst	PhD	2010

Positions and Honors

Recent Positions

2022 – current	Director of Health, Safety and Environment Program	Sunshine ERC
2021 – current	Adjunct, USF Health Associate Professor	USF CPH EOH/GPH
2010 – 2021	Adjunct, USF Health Assistant Professor	USF CPH EOH/GPH
2010 – present	Director	CEORAM*
	*Center for Environmental/Occupational Risk Analysis & Management	
2020	OPS, Biological Scientist IV	FDOH COVID Response

External Activities

2024	Program Review	Occ & Env Health, University of Oklahoma
	Health	Sciences Center
2016	Program Review	Toxicology, Fort Valley State University NSF HBCU-UP

Honors

2006, 2008 Kulkarni Award	College of Public Health, University of South Florida
2007 USF Health Doctoral Fellowship	College of Public Health, University of South Florida
2009 SHARP Award	College of Public Health, University of South Florida
2010 Delta Omega	
2012 Early Career Investigator Award	College of Public Health, University of South Florida

Courses Created or Taught

Undergraduate

- HSC3503 Principles of Toxicology
 - Spring, Summer, Fall 2016 - 2024
- HSC3541 Human Structure and Function
 - Spring, Summer, Fall 2014 - 2016
- HSC4213 Environmental Occupational Risk Analysis
 - Spring 2018 - 2024
- HSC4631 Critical Issues in Public Health
 - Summer, Spring, Fall
- HSC4933 Research Methods in Environmental and Occupational Health
 - Spring, Summer, Fall
- HSC4933 Ecotoxicology
 - Fall 2013 – 2015
- HSC4933 Independent Study
 - Fall 2019
- PHC3302 Introduction to Environmental and Occupational Health (course supervisor/instructor)
 - Spring, Summer, Fall 2013 - 2024
- PHC3320 Environmental Health Science
 - Spring, Summer, Fall 2018 - 2024
- PHC4101 Introduction to Public Health
 - Summer, Fall 2013, 2015
- PHC4755 (previously PHC4942) Foundation of Evaluation and Research
 - Spring, Summer, Fall 2015 - 2018
- PHC4931 Health Care Ethics
 - Spring 2017
- PHC4942 Environmental Exposure Seminar
 - Summer 2013
 - Spring, Fall 2020 - 2024

Graduate

- HSC6556 Pathobiology of Human Disease
 - Spring, Fall 2020 – 2024
- HSC6557 Pathobiology of Human Disease II
 - Summer 2013 - 2014
- PHC6310 Environmental and Occupational Toxicology
 - Spring, Fall 2013 - 2024
- PHC6353 Environmental Occupational Risk Assessment
 - Spring, Summer, Fall
- PHC6359 Xenobiotic Metabolism
 - Spring, Summer, Fall

- PHC6369 Industrial Toxicology
 - Summer 2022 - 2023
- PHC6907 Independent Study
 - Summer, Fall 2014 - 2019
- PHC6934 Occupational Health and Safety
 - Summer 2021
- PHC6943 ILE
 - Summer, Fall 2020 - 2022
- PHC6949 APE
 - Spring, Summer, Fall 2020 - 2022
- PHC6945 Supervised Field Experience
 - Spring, Summer 2013 - 2017
- PHC6971 Thesis: MSPH
 - Spring, Summer, Fall 2015 - 2021
- PHC6977 Special Project: MPH
 - Spring, Summer, Fall 2012 - 2019
- PHC7154 Evidence Informed Public Health
 - Spring 2017
- PHC7908 Spec Study in Public Health
 - Fall 2016
 - Spring, Fall 2018
 - Spring, Fall 2017 - 2018
- PHC7910 Directed Research
 - Spring, Summer, Fall 2017 - 2018
- PHC7919 Public Health Doctoral Project
 - Spring, Summer 2019
 - Summer 2022
- PHC7931 Forensic Toxicology
 - Fall 2014
- PHC7931 Retractions in Public Health
 - Spring 2014 – 2017
- PHC7980 Dissertation
 - Spring 2018

Certificates Created

- Assessing Chemical Toxicity and Public Health Risks
- Toxicology

Invited Lectures and Presentations

Guest Lectures in Other Courses, Programs

- PHC6356 Industrial Hygiene
- PHC6934 Occupational Safety and Health Foundations
- PHC6756 Population Assessment 1
- PHC6757 Population Assessment 2
- Executive MPH program
- Environmental Research Interdisciplinary Colloquium

- Public Health Practice Seminar
- Careers in Public Health

Presentations

- 'Occupational Exposure Hazards for Industrial Painters' ACS Annual Meeting, Washington, DC
- 'Understanding Threats to Hearing From Ototoxicants Exposure' AIHA Virtual University
- 'Understanding Threats to Hearing From Ototoxicants Exposure' at AIHA CONNECT, Kansas City, MO
- 'Understanding Threats to Hearing Beyond Noise From Ototoxicants Exposure' at AIHA CONNECT, Columbus, OH
- 'The Toxicology of Climate Change' at "Science, Strategies and Solutions: Addressing Climate Change in Tampa Bay" Workshop
- Pharmacological Modulation of Drug-induced Hepatotoxicity by PARP Inhibitors' For Biology Department at the University of Tampa seminar series and Environmental Research Interdisciplinary Colloquium at the University of South Florida
- Chemistry Workshop "Moving atypical PKC Inhibitors towards the Clinic"
 - Changing Face of Toxicity Testing
 - Toxicity of ICA-1
 - Chronic Toxicity of ICA-1S
 - Toxicokinetics of ICA-1S
- SciMind Toxicology Content Developer/Contributor for Continuing Education– American Chemical Society
- Brown Bag Lunch Lecture Series for USF College of Psychology
- 'Drugs in the Workplace Safety' seminar for Midwest Employers Casualty Company
- 'Identifying Human and Environmental Toxicants: The Why, What, and How of Analytical Approaches' webinar for Chromedia and ACS
- 'Greening Your Research' Workshop for the ACS Green Chemistry Institute at GC&E Conference Bethesda, MD

Partnerships/Collaborations

- AIA-ACSA Design & Health Research Consortium
- SCCAHS: Southeastern and Coastal Center for Agricultural Safety and Health
- Oceans and Human Health/Joint Institute for Gulf of Mexico Studies
- Toxicology for Chemists Advisory Group
- Florida Medical School Quality Network Donor Human Milk Workgroup
- ChemClarity

Service and Outreach

Service

- *USF*
 - General Education Council (current chair)
 - BOT Academics & Campus Environment Workgroup
 - Castle Conference
 - DrPH Advisory Group
 - CPH Research Committee
 - CPH Curriculum Committee
 - EOH Student Support Committee
 - PLRP mentor for Pharmacy Longitudinal Research Project (PLRP)

- Outstanding Undergraduate Teaching Award Committee
 - Laboratory Safety and Strategic Plan sustainability workgroup
 - CREATTE mentor
 - FLC – Undergraduate Research
 - FLC – Service Learning
 - EOH Curriculum Committee
- *Society of Toxicology*
 - Undergraduate Diversity Program/Undergraduate Education Program mentor
 - Officer in Southeastern Society of Toxicology Regional chapter (past president, president, president elect, secretary, treasurer and councilor)
 - Officer in Occupational Public Health Specialty Section (past president, president, president elect, secretary, treasurer and councilor)
 - Committee on Diversity Initiatives
 - Education and Career Development Committee
 - Faculty United for Toxicology Undergraduate Recruitment and Education (FUTURE) Committee
 - Continuing Education Committee
 - Officer in Mixtures Specialty Section
 - Officer in Risk Assessment Specialty Section
 - Officer in Computational Toxicology Specialty Section
 - K12 Outreach Committee
 - Chair of Regional Chapter Communication and Collaboration Committee
 - *American Chemical Society*
 - Head of Policy, Committee for Environmental Improvement
 - Councilor for Tampa Bay ACS
 - *Society of Environmental Toxicology and Chemistry*
 - Human Health Risk Assessment Advisory Group Steering Committee
 - Scientific Outreach and Communication
 - Virtual presenter at SETACEU
 - Session chair
 - *American Industrial Hygiene Association*
 - Toxicology Committee - Officer
 - Risk Committee
 - Biological Monitoring Committee
 - Dermal and Surface Sampling Working Group
 - Improving Exposure Judgments Advisory Group
 - Academic Advisory Group
 - *Florida OneWater Commission Member*

Outreach

- K12 Outreach Service-Learning project (PHC3302)
- Great American Teach In
- Skype a Scientist
- Regional and Local Science Fair contact/judge
- STEM fair judge

- 500 Women Scientists tie in with 30th anniversary and women's suffrage

Current Research

- NIEHS Distance Education and Training on Emerging Contaminants and Technologies (DETECT)
- Lactational Transfer of Pesticides and Other Environmental Contaminants (COPH)
- Environmental Contaminants in Infant Nutrition (COPH)
- Environmental Contaminants in Central Florida Raptors (City of Largo, CEORAM)
- Pesticide Induced Hypoxia in PND1 Rats (CEORAM)
- Toxicity assessment of novel chemotherapeutics on prostate/breast cancer xenografts (Chemistry)
- Chemical Analysis and Toxicity Assessment of Local Kratom Products (PLRP)
- Pharmacological Modulation of Chemical-Induced Organ Toxicity by PARP Inhibitors (CEORAM)
- Cocktail effect in freshwater systems: assessing the potential toxicity of environmentally relevant pesticide mixtures (CEORAM)
- Environmental and Human Health Risk Assessment of Perfluorinated Compounds
- Virucidal Efficacy of ClO₂ (CEORAM)
- Long Range Effects of Sea Level Rise and Climate Change in Hillsborough County (Urban Design)

Ongoing Research Support

External Funding

- Sponsor: City of Largo, Kulkarni Foundation, CEORAM
Title: Environmental Contaminants in Central Florida Raptors
Period: 2023 – current
Role: PI
Contract award amount: \$5,000
- Sponsor: NIH/NIEHS (1R25ES033045-01)
Title: Distance Education and Training on Emerging Contaminants and Technology (DETECT)
Period: 2021 – 2026
Role: PI
Contract award amount: \$197,300
- Sponsor: Leo and Anne Albert Charitable Trust
Title: Assessment of Zeta Stat toxicity
Period: 2020 – ongoing
Role: Co-I
Contract award amount: \$4,500
- Sponsor: Leo and Anne Albert Charitable Trust
Title: ICA1 Toxicity Assessment
Period: 2016 - ongoing
Role: Co-I
Contract award amount: \$7,500

Internal Funding

- Sponsor: CEORAM, Kulkarni Foundation
Title: Campus Environmental Health Survey
Period: 2023 – current
Role: PI
- Sponsor: USF CPH, USF COP
Title: Chemical Analysis and Toxicity Assessment of Local Kratom Products
Period: 2020 – ongoing
Role: Co-I
- Sponsor: USF CPH/CEORAM
Title: Pharmacological Modulation of Chemical-Induced Organ Toxicity by Poly(ADP-ribose)Polymerase (PARP) Inhibitors
Period: 2018 - current
Role: Co-I, PI
- Sponsor: USF CPH, Kulkarni Foundation
Title: Lactational Transfer of Pesticides and Other Environmental Contaminants
Period: 2017 – current
Role: PI

Completed Research Support

External Funding

- Sponsor: Hillsborough County Public Works (USF Project # 3310126100).
Title: Community Vulnerability Study.
Period: 2017-2020,
Role: Co-I
Contract award amount: \$286,000.00
- Sponsor: Kennedy Space Center
Title: Epigenetic Changes in *C Elegans* Induced by E Coli O157:H7/Shiga Toxin Exposure
Period: 2019 – 2021
Role: Co-I
Contract award amount: \$8,000
- Sponsor: University of Kentucky Southeast Center for Agricultural Health and Injury Prevention
Title: A Pilot Study of Malathion, Atrazine, Carbaryl and Chlorpyrifos in the Breast Milk of Women in Suburban and Agricultural Communities of Central Florida
Period: 2015 – 2016
Role: PI
Contract award amount: \$15,000

Internal

- Sponsor: University of South Florida/CEORAM
Title: Determination of Bradycardia Following Parenteral Application of Chlorpyrifos Period: 2019 – current
Role: Co-I
- Sponsor: University of South Florida/CEORAM
Title: Pharmacological Modulation of Chemical-Induced Hepatotoxicity by Poly(ADP-ribose)Polymerase (PARP) Inhibitors
Period: 2013 - 2018
Role: PI
- Sponsor: Sunshine Education and Research Center, University of South Florida.
Title: Effects of Heat Stress on Urinary Expression of Inflammation, Cardiovascular Disease and Oxidative Injury Cytokines
Period: 2008-2010 Role: PI
Contract award amount: \$8,000

Selected Publications

- Bourgeois, M., Guth, K., & Harbison, R. (2025). Disinfection of simulated residual SARS-CoV-2 in air by chlorine dioxide gas in an ambulance setting. *Journal of Emergencies, Trauma, and Shock*. In press.
- Thayagabalu, S., Cacho, N., Sullivan, S., Smulian, J., Louis-Jacques, A., Bourgeois, M., Chen, H., Weerasuriya, W., & Lemas, D. J. (2024). Systematic review of contaminants in donor human milk. *Journal of Maternal and Child Nutrition*. <https://pubmed.ncbi.nlm.nih.gov/38268226>
- Bourgeois, M., Guth, K., Sutherland, D., & Harbison, R. (2023). Cyanides and nitriles. In *Patty's Toxicology* (6th ed.). John Wiley & Sons, Inc. <https://doi.org/10.1002/0471125474.tox061.pub3>
- Powell, A. T., Bourgeois, M. M., Lichterman, J., Johnson, G. T., Galwankar, S., & Harbison, R. D. (2022). Opioid-related overdose fatality cases in two Florida counties. *Journal of Emergencies, Trauma, and Shock*, 15(2), 83–87. https://doi.org/10.4103/jets.jets_130_21
- Lopez, D., Roberts, J., Bourgeois, M., Kootstra, J., Minnick, S., Black, A., et al. (2022). Infection clusters can elevate risk of diagnostic target failure for detection of SARS-CoV-2. *PLoS ONE*, 17(2), e0264008. <https://doi.org/10.1371/journal.pone.0264008>
- Guth, K., Bourgeois, M., & Harbison, R. (2022). Assessment of lead exposures during abrasive blasting and vacuuming in ventilated field containments: A case study. *Occupational Diseases and Environmental Medicine*, 10, 116–131. <https://doi.org/10.4236/odem.2022.102010>
- Driver, J., Lichterman, J., Lukasik, G., Jones, S., Bourgeois, M., & Harbison, R. (2022). Bactericidal and fungicidal efficacy of chlorine dioxide in various workspaces. *Occupational Diseases and Environmental Medicine*, 10, 49–59. <https://doi.org/10.4236/odem.2022.102004>

- Sutherland, D., Beau, A., Bourgeois, M., & Harbison, R. (2021). Analysis of PFAS levels and associations with adolescent anthropometric outcomes in NHANES. *Occupational Diseases and Environmental Medicine*, 9, 93–111. <https://doi.org/10.4236/odem.2021.93008>
- Driver, J., Lukasik, G., Bourgeois, M., Tam, P., & Harbison, R. (2021). Virucidal activity of chlorine dioxide gas for reduction of coronavirus on surfaces and PPE. *Occupational Diseases and Environmental Medicine*, 9, 13–19. <https://doi.org/10.4236/odem.2021.91002>
- Guth, K., Bourgeois, M., Johnson, G., & Harbison, R. (2020). Evaluation of the effectiveness of Hygenall Leadoff foaming soap in reducing lead on workers' hands and the uptake of lead on bridge painting projects. *Occupational Diseases and Environmental Medicine*, 8, 123–134. <https://doi.org/10.4236/odem.2020.84010>
- LeBeau, A., Sutherland, D., Bourgeois, M., Driver, J., & Harbison, R. (2020). Examination of urinary chlorpyrifos biomarker concentrations and heart rate in a sample of US children and adolescents. *Occupational Diseases and Environmental Medicine*, 8, 163–174. <https://doi.org/10.4236/odem.2020.84013>
- Sabia, T., Cook, B., Dunn, E., Bohn, J., Bell, C., Bourgeois, M., Leamer, O., Cook, W., et al. (2019). Volume 1: Community vulnerability study (CVS). In *The Community Vulnerability Handbook: A Comprehensive Overview of Policies, Assessments and Impacts Associated with the 'Peril of Flood' for Hillsborough County*. www.planhillsborough.org/hillsborough-county-community-vulnerability-study
- Bourgeois, M., Guth, K., Harbison, R., & Wexler, P. (Ed.). (2019). Information resources in toxicology (5th ed.). Chemicals: Solvents.
- Guth, K., Bourgeois, M., Johnson, G., & Harbison, R. (2019). Evaluation of lead exposure by hand wipes: A review of the effectiveness of personal hygiene on industrial sites. *Occupational Diseases and Environmental Medicine*, 7(4). <https://doi.org/10.4236/odem.2019.74011>
- Aubrecht, K., Bourgeois, M., Brush, E., MacKellar, J., & Wissinger, J. (2019). Integrating green chemistry in the curriculum: Building student skills in systems thinking, safety, and sustainability. *Journal of Chemical Education*. <https://doi.org/10.1021/acs.jchemed.9b00354>
- Apostolatos, A. H., Apostolatos, C. A., Ratnayake, W. S., Neuger, A., Sansil, S., Bourgeois, M., & Acevedo-Duncan, M. (2018). Preclinical testing of 5-amino-1-((1R,2S,3S,4R)-2,3-dihydroxy-4-methylcyclopentyl)-1H-imidazole-4-carboxamide: A potent protein kinase C- α inhibitor as a potential prostate carcinoma therapeutic. *Anticancer Drugs*. <https://doi.org/10.1097/CAD.0000000000000694>
- Henning, R., Bourgeois, M., & Harbison, R. (2018). Poly(ADP-ribose) polymerase (PARP) and PARP inhibitors: Mechanisms of action and role in cardiovascular disorders. *Cardiovascular Toxicology*. <https://doi.org/10.1007/s12012-018-9462-2>
- Coyle, J. P., Rinaldi, R. J., Johnson, G. T., Bourgeois, M. M., McCluskey, J., & Harbison, R. D. (2018). Reduced oxygen tension culturing conditionally alters toxicogenic response of differentiated H9c2 cardiomyoblasts to acrolein. *Toxicology Mechanisms and Methods*.

- Coyle, J. P., Rinaldi, R. J., Johnson, G. T., Bourgeois, M. M., McCluskey, J., & Harbison, R. D. (2017). Acrolein measurement and degradation in Dulbecco's Modified Eagle Medium: An examination of in-vitro exposure metrics. *Toxicology Mechanisms and Methods*.
- Bourgeois, M., Johnson, G., & Harbison, R. (2017). Human health risk assessment. In S. R. Quah & W. C. Cockerham (Eds.), *The [book title missing]* (Vol. 4, pp. 84–94). Oxford: Academic Press.
- Harbison, R., Bourgeois, M., & Johnson, G. (Eds.). (2015). *Hamilton and Hardy's Industrial Toxicology* (6th ed.). Wiley.
- Coyle, J. P., Mayo-Perez, A., Bourgeois, M., Johnson, G., Morris, S., & Harbison, R. D. (2015). The assessment of an in-vitro model for evaluating the role of PARP in ethanol-mediated hepatotoxicity. *International Journal of Critical Illness and Injury Science*, 5, 9–16.
- McCluskey, J., Bourgeois, M., & Harbison, R. (2014). Tulipalin A induced phytotoxicity. *International Journal of Critical Illness and Injury Science*, 4, 180–182.
- Richards, I. S., & Bourgeois, M. (2014). *Principles and practices of toxicology in public health* (2nd ed.). JB Learning.
- McCluskey, J., Bourgeois, M., & Harbison, R. (2013). A case of mistaken identity - Ocular histoplasmosis in Florida. *Journal of Clinical Toxicology*, S5, 007. <https://doi.org/10.4172/2161-0495.S5-007>
- DeHate, R., Skelly, B., Bourgeois, M., Desai, U., Johnson, G. T., & Harbison, R. D. (2013). Managing public health risks using air monitoring at a former manufactured gas plant site. *Journal of Environmental Protection*.
- DeHate, R., Skelly, B., Bourgeois, M., Desai, U., Johnson, G. T., & Harbison, R. D. (2013). Assessment of public health risks associated with naphthalene entering residences and commercial space from vapor intrusion at MGP sites. *Journal of Environmental Protection*, 4(12A).
- Richards, I. S., & Bourgeois, M. (2013). Expression of myoglobin in the urine of cocaine users. *International Journal of Clinical Medicine*, 4(4).
- Richards, I. S., & Bourgeois, M. (2010). Gender specific differences in the urinary expression of myeloperoxidase, interleukin 1a and interleukin 1β. *Biomarkers in Medicine*, 4(6), 843–847.
- Richards, I. S., & Bourgeois, M. (2010). Red tide toxin produces in vitro depolarization of human airway smooth muscle. *Clinical Toxicology*, 48(2), 121–123.
- Richards, I. S., & Bourgeois, M. (2009). The toxicologist as expert witness. In B. Ballantyne, T. C. Marrs, & T. Syversen (Eds.), *General and Applied Toxicology* (3rd ed.). Wiley.

Reviewer and Editor

- Section Editor Drug and Chemical Toxicology

- Reviewer for APTR-CDC Interprofessional Education Approach to Develop Public Health Practice & Policy Fellowship
- Reviewer for the Paul Ambrose Scholars Program
- Reviewer for ASPH/EPA Public Health Fellowship Program
- Reviewer of abstracts submitted for the APHA Annual Meeting specifically for the Occupational Health and Safety program
- Reviewer of abstracts submitted for the APHA Annual Meeting specifically for the Academic Public Health Caucus program
- Reviewer for L'Oreal USA For Women in Science Award