



## PFAS Network (Per- and Polyfluoroalkyl Substance Testing Network)

### Meet Team 5: Applied research opportunities

**Rebecca Fry, Ph.D.**, co-lead, is Professor and Associate Chair for Strategic Initiatives in Environmental Sciences and Engineering at UNC Chapel Hill. Dr. Fry's lab uses toxicogenomic and systems biology approaches to identify key molecular pathways that associate environmental exposures with development of disease.

**Jamie DeWitt, Ph.D.**, co-lead, is Associate Professor of Pharmacology and Toxicology at East Carolina University. Dr. DeWitt's lab studies how early life exposure to a variety of agents including environmental contaminants may impact the immune, nervous, and endocrine systems, during development and adulthood.

5a: **Morton Barlaz, Ph.D.**, Professor and Head of the Department of Civil, Construction, and Environmental Engineering at NC State University

**Jean-Rene Thelusmond, Ph.D.**, Postdoc at NCSU

Team Objective: Estimate the total quantity of PFAS present in leachate that is subsequently discharged to either Publicly Owned Treatment Works (POTWs) or to surface water after on-site treatment at municipal solid waste (MSW) landfills and landfills that receive construction and debris (C&D) waste.

5b: **Scott Belcher, Ph.D.**, Professor of Toxicology at NC State University

**Theresa Guillette, Ph.D.**, Postdoc at NCSU

Team Objective: Increase understanding of the potential for bioaccumulation and adverse impacts of PFASs, including GenX, on the health of the Cape Fear River aquatic ecosystem.

5c: **Jamie DeWitt, Ph.D.**, Associate Professor of Pharmacology and Toxicology at ECU

**Samuel Vance**, graduate student at ECU

Team Objective: Evaluate immunotoxicity (dose-responsive suppression of antigen-specific antibody responses) in mice exposed to PFASs.

5d: **Owen Duckworth, Ph.D.**, Professor of Crop and Soil Sciences at NC State University

**Stephen Broome, Ph.D.**, Professor of Crop and Soil Sciences at NC State University

**Detlef Knappe, Ph.D.**, Professor of Civil, Construction, and Environmental Engineering at NCSU

**Yuanbo Li, Ph.D.**, Postdoc at NCSU

Team Objective: Improve understanding of PFAS uptake and distribution within plant tissues and to explore how soil properties and management strategies may impact PFAS uptake and distribution.

5e: **Rebecca Fry, Ph.D.**, Professor and Associate Chair of Environmental Sciences and Engineering at UNC Chapel Hill

**Tracy Manuck, M.D. M.S.**, Associate Professor of Obstetrics & Gynecology, UNC Chapel Hill

**Matthew Lockett, Ph.D.**, Assistant Professor of Chemistry, UNC Chapel Hill

**Stephanie Sun, Pharm.D.**, Clinical Research Assistant, UNC Chapel Hill

**Jackie Bangma, Ph.D.**, Postdoc at UNC Chapel Hill

Team Objective: Determine levels of PFAS in drinking water; assess exposure in pregnant women; and investigate the impact of PFAS on the placenta and pregnancy outcomes as well as the mechanisms underlying the adverse effects.

5f: **Nick Luke, Ph.D.**, Associate Professor of Mathematics at NC A&T State University

Team Objective: Conduct quantitative analysis of experimental immunotoxicity and systemic toxicity data and construct computer-based models (Reference Dose and PBPK) to support derivation of health goals for measured PFAS.