



PFAST Network (Per- and Polyfluoroalkyl Substance Testing Network)

Meet Team 5b: Bioaccumulation of PFAS into Aquatic Environments

Scott Belcher, Ph.D., project lead, is a Research Professor in Biological Sciences and the Toxicology Program at NC State University. Dr. Belcher studies actions of endogenous hormones, endocrine disruptors and estrogen signaling during normal development and the specific causes of hormonally regulated pathology in the brain, heart and reproductive system. His research leverages his broad expertise in molecular genetics, molecular and cellular biology, pharmacology, animal models of pediatric cancer and chemotherapy, whole animal physiology of the endocrine and nervous systems, and toxicology of hormonally active chemicals (endocrine disruptors).

Theresa Guillette, Ph.D., Postdoc at NC State, animal capture, sampling, mass spec analysis

Matthew Guillette, consultant (field biologist) specializing in animal capture, handling, and sampling

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 Specific aims include:

- Conduct untargeted analysis of alligator and striped bass serum samples collected from the Cape Fear River and Pamlico Aquaculture Facility.
- Collect and analyze liver and muscle of adult sunfish/bluegill and largemouth bass from other smaller water sources associated with known point source of PFASs (near Chemours).
- Develop detailed ecological models to help identify geographical areas of concern within the Cape Fear watershed and share derived data with NC DEQ and other regulatory agencies.