

## **PUBLIC HEALTH IMPACTS OF FLORIDA COMMUNITIES EXPOSED TO CYANOBACTERIAL HARMFUL ALGAL BLOOMS**

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Cyanobacterial Harmful Algal Blooms (HABs) have been a major Public Health concern affecting water in Florida and across the United States with increasing impacts over the last several decades. Environmental exposure to cyanobacterial toxins results in both short and long-term health effects since they can enter the body via multiple exposure pathways, including dermal, ingestion and inhalation.

Along with the increase in frequency, intensity and geographical distribution of HAB events in recent years, there has been a rise in the Public Health impacts of populations that live, work or recreate near contaminated waters in Florida, especially in Lake Okeechobee (and surrounding areas), where many HAB events have been reported.

The DISPEL to HABs study was created in 2019 to assess the health risks of Florida communities exposed to HABs. In this “citizen science” study, a cohort of participants comprised of Florida residents, workers and visitors was designed. Participant enrollment began in February 2020 and the study is ongoing, with the primary goal of conducting long-term and repeated evaluation of survey and biomonitoring data for the cohort. Participants contributed home tap water samples, outdoor surface water samples from their local waterways, as well as nasal swabs which were analyzed for congener-specific toxin concentrations using HPLC-MS. In addition, enrolled participants contributed oral and stool samples for microbiome analysis and pulmonary function tests (PFT), which were analyzed before and after exposure to HABs.

PRESENTER BIO: Dr. Maizel is an Environmental Scientist with extensive experience in water quality research, with a focus on microbial processes. She has published and collaborated with more than 10 different publications dedicated to the analysis of contaminants naturally present in environmental waters.