

Session 2

Toxic exposures and vulnerable populations in diverse environments Tuesday, April 6 at noon

Residential Outdoor Air Microbiome (ROAM): Exploring its environmental predictors, impacts on human gut and salivary microbiome, and association with human health effects

Jennifer Styles (PhD) – Advisor: Jill Stewart

Abstract: This study aims to characterize the relationship between the residential outdoor air microbiome, vegetated land cover, human gut and saliva microbiomes, and human health effects.

About Jennifer: I have been studying environmental health microbiology for about 6 years. I played tenor saxophone in the UNC marching band while I was in undergrad. I want to continue studying environmental exposures (particularly microbes) and their impacts on human health.

The Placental Epigenetic Clock as a Mediator of Perinatal Stressors on Potential Neurological Outcomes

Katelyn Huff (PhD, 2nd year) – Advisor: Rebecca Fry

Abstract: This talk outlines strategies to assess how epigenetic clocks in the placenta are affected by perinatal stressors and whether they mediate later life outcomes.

About Katelyn: I'm a second year CiTEM doctoral student in the Fry lab focusing on reproductive toxicology. Fun Fact: during my undergrad research, I milked mice. After my studies, I hope to apply gained tools to further improve future public health.

Toxic Cyanobacteria: A Growing Threat to Water and Air Quality

Haley E. Plaas (PhD, 2023) – Advisor: Hans W. Paerl

Evaluation of drinking water contaminants in a peri-urban neighborhood after connection to municipal water service

April Desclos (MS, 2021) – Advisor: Jacqueline MacDonald Gibson

Abstract: A majority African-American neighborhood in Apex, North Carolina was recently connected to public water after attempting to access town services for many years. A longitudinal study was conducted to determine how levels of drinking water contaminants change after residents relying on private wells were connected to Apex water. Kitchen tap samples were analyzed for metals and per- and polyfluoroalkyl substances (PFAS), and sequential samples were collected to determine whether flushing reduces exposure to lead.

About April: My research interests include policy instruments, water chemistry, and disparities in exposure to pollution. I want to use my MS and environmental law degree to advocate for science-

based policies that address chemical contaminants from source to tap. In my free time, I'm learning Dutch because...why not?