

What bacteria can tell us about the built environment

Bio: **Dauida Smyth (She/Her/Hers)** is an Associate Professor of Microbiology at Texas A&M University in San Antonio, Texas. She conducts research with her undergraduate team in comparative microbial genomics and evolution, studying *Staphylococcus aureus* from animals and from humans and researches the role of the built environment and anthropogenic activity in driving antibiotic resistance, a major global health threat. She also engages in pedagogical research on improving civic and scientific literacy in biology and integrating authentic research into the curriculum to improve student engagement and success in science. She received the Mercy College Teaching Excellence Award in 2018 and the Eugene Lang College of Liberal Arts Faculty Advisor award in 2020. She is a Senior SENCER Leadership Fellow, PALM Mentor and PULSE Fellow and Ambassador. She is Deputy Director of the National Center for Science and Civic Engagement and co-PI on the NSF funded Research Experiences in Microbiome Network.

Abstract: Since the emergence of the COVID-19 pandemic, there has been an unprecedented interest in identifying ways to monitor emergence of pathogens and how to monitor pathogen transmission. Many groups have focused on developing ways to measure and quantify aerosols, others have investigating microbes on surfaces and others are investigating water and wastewater-based surveillance methods. Through such methods of environmental surveillance, large populations of individuals can be monitored at different levels of scale, in passive, non-invasive, and affordable ways. This talk will focus on how we're studying microbes in the built environment and what they can tell us about the risk to health of our populations.