CASE WESTERN RESERVE UNIVERSITY

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Via Zoom and in person in DeGrace 312
Lecture open to University and Affiliates

Department of Biology Seminar Series Presents:

"Mini-bioreactors to elucidate bacterial communication in the vaginal and upper respiratory tract"

Corine Jackman, PhD

Presidential Postdoc

Departments of Chemical Engineering and Biological Sciences

Carnegie Mellon University

Meeting ID 931 2408 6897
Passcode 586645

Dr. Jackman applies engineering concepts to answer biological questions related to microbial interactions and how they relate to health and disease. Her dissertation evaluated and validated microdroplets as an effective tool for co-culturing and recapitulating amensalism between two vaginal bacteria. There, she also developed a novel ex-vivo model to culture the common yet fastidious vaginal bacterium, Lactobacillus iners in droplets containing human vaginal fluid. As a postdoc she used microdroplets to study a virulence determinant involved in cell-signaling of Streptococcus pneumoniae, a pathogen in the upper respiratory tract. By investigating how cell density and environmental cues affect signaling at the single cell and population levels, and how heterogeneity emerges within and across populations, we gain insight on how pneumococcal cell-communication may be contributing to disease. Dr. Jackman has been funded by NSF, NIH, the Ford Foundation, the Burroughs Wellcome Fund, and CMU. She earned her B.S. in Chemical Engineering from Howard University, and her M.S. and PhD in Chemical Engineering from the University of Michigan. She strives to continue being a role model and mentor to others as she extends her platform to advance knowledge for the development of diagnostics, treatment, and therapeutics.

Thursday September 14, 4pm