UC RIVERSIDE
School of Medicine
DIVISION OF BIOMEDICAL SCIENCES

Biomedical Sciences speaker series presents:

BRYAN BROWN, PH.D.

Assistant Professor of Computational Biology

"Inter-kingdom microbial determinants of altered immunity in African women and infants"

DIVISIONAL SEMINAR SERIES

BIOGRAPHY

MONDAY, MARCH 10, 2025

4PM-5PM

SCHOOL OF MEDICINE EDUCATION BUILDING II ROOM 205

Bryan Brown, PhD is an Assistant Professor of Computational Biology at the University of California Riverside in the Department of Molecular, Cell, and Systems Biology. He studied the ecology and evolutionary outcomes of host-bacterial symbioses in the gastrointestinal tract during his PhD studies at Duke University. He then pursued a postdoctoral fellowship at Seattle Children's Hospital and the University of Washington, focusing on microbial determinants of human health.

Research in his group employs both computational and experimental approaches to investigate how bacteria and viruses interact with each other and our immune cells to shape health and disease outcomes. His group has explored these relationships in the context of cisgender female reproductive health and perinatal health, employing multiomic techniques in a reverse translational framework to translate insights from clinical samples into a mechanistic understanding of disease outcomes using experimental models. Specifically, they are interested in exploring how bacterial-viral-immune dynamics affect shifts between homeostasis and dysbiosis and alter disease susceptibility, immune development, and responses to vaccination. They are currently investigating mechanisms by which bacteriophages may shift the composition of vaginal bacterial communities toward bacterial vaginosis and may also be influenced by contraceptive initiation and use. Additionally, they aim to identify mechanisms by which resident bacteria and viruses in the infant GI tract affect lymphocyte recruitment and responses to vaccination. They are also interested in evolutionary outcomes of bacteriophage-bacteria interactions and aim to leverage these interactions for therapeutic options.