



Vanderbilt Institute
for Infection,
Immunology and
Inflammation

Department of Pediatrics,
**Division of Pediatric
Infectious Diseases**



Vanderbilt Pre³
Initiative

Faculty Candidate Special Seminar

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Fellow, Division of Pediatric Infectious Diseases
Boston Children's Hospital



***“Competition and Cooperation in the Female
Reproductive Tract Microbiome”***

The microbiota of the female reproductive tract is central to sexual and reproductive health, influencing fertility, preterm birth and HIV acquisition. However, the ecological drivers shaping these microbial communities remain incompletely understood, limiting our ability to intervene on the microbiota to benefit the host. We hypothesize that these microbe-microbe and environment-microbe interactions are key drivers in shaping community composition and interaction with the host. To address this hypothesis, my work has focused on empirically characterizing the key bacterial taxa that occupy the human reproductive tract, while also developing methods to study their interactions within complex communities. To date, my work has defined sub-species level variation in both glycan utilization and interspecies competition that together drive community composition. These studies provide new mechanistic insight into the compositional dynamics observed in microbial communities within the host, with potential implications for selectively shaping these communities for therapeutic benefit.

**Thursday, January 24th from 11:00 AM – 12:00
C-2303 Medical Center North (MCN)**

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