



# MMI 291 Seminar Series

Current Theme: Interdisciplinary Research

Spring Quarter 2020 – **CRN 73287**

**Friday Seminar – 12:10-1 p.m.**



## “OMICS Approaches to Study Host-Vaginal Microbiome Interactions”

### Research

Over the past 16 years my laboratory has developed a research program ([ravel-lab.org](http://ravel-lab.org)) focused on applying modern genomics technologies and ecological principles to characterize the role and dynamics of the vaginal microbiome in women's health. Particularly, we apply systems biology approaches to examine the triangular relationship between human genetic variation, sexually transmitted infections and co-infections caused by *Chlamydia trachomatis* and *Neisseria gonorrhoeae*, HIV and the function of the vaginal microbiome. Further, the laboratory also studies the role of the vaginal microbiota in bacterial vaginosis, pregnancy and prematurity, as well as the health of neonates. Our work is currently being translated by developing novel live microbiome-based live biotherapeutic drugs to restore vaginal health, treat conditions such as bacterial vaginosis and urinary tract infections.

### Publications

*Temporal dynamics of the human vaginal microbiota.* Pawel Gajer, Et al. Sci Transl Med. 2012 May.

*Cervicovaginal microbiota and local immune response modulate the risk of spontaneous preterm delivery.* Michal A. Elovitz, Et al. Nature Communications. 2019 March.

*Temporal dynamics of the human vaginal microbiota.* Pawel Gajer, Et al. Sci Transl Med. 2012 May.

# April 17



**Jacques Ravel, PhD.**

Professor Microbiology and Immunology

Associate Director for Genomics  
Institute for Genome Sciences Health  
Sciences Facility III  
University of Maryland, School of  
Medicine

**April 17, 2020  
12:10 – 1 p.m.  
ZOOM Meeting**

Medical Microbiology &  
Immunology  
School of Medicine

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We hope to see you there!