



# cMEDA-

## Center for Microbiome Engineering & Data Analysis

June 2019 News



# Newsletter

**Vision:** to exploit the microbiome to improve human health and the environment.

## Other news:

1. Forum Planning: the cMEDA Microbiome Forum will launch in September, meet once per month at lunchtime, two speakers per forum. Two external speakers have been invited. Stay tuned for dates/locations. (contact Jeff Donowitz).
2. cMEDA website development is nearing completion (contact Ekaterina Smirnova).
3. Our Membership Team has developed a plan for recruiting fellows and maintaining a current list. This will go live soon on the cMEDA website (contact Ping Xu).

## cMEDA Mission Statement:

to apply cutting-edge multi-omic technologies and quantitative computational tools in collaborative interdisciplinary research programs that will define and dissect the role of the microbiome in human health, disease, and the environment.

**Vaginal Microbiome Consortium** publishes manuscripts in *Nature Microbiology*, *Nature* and the *Journal of Perinatology* (over 50 VCU investigators contribute):

- Serrano & Parik et al., Racioethnic diversity in the dynamics of the vaginal microbiome during pregnancy. *Nature Med* 25: 1001-1011 (2019).
- Fettweis et al., The vaginal microbiome and preterm birth. *Nature Med* 25: 1012-1021 (2019).
- The integrative human microbiome consortium. The Integrative human microbiome project. *Nature* 569: 641-648 (2019).
- Jefferson et al. Relationship between Vitamin D status and the vaginal microbiome during pregnancy. *Journal of Perinatology* 39: 824-836 (2019).

Major contributions from the Colleges of Engineering and Humanities and Science and the Schools of Medicine, Dentistry Business & Pharmacy.

## New Grant:

***Associations of intestinal and circulating microbial biomarkers with the development of Alcoholic Hepatitis***

CCTR Emerging Scholars Award to Ekaterina Smirnova with Arun Sanyal.

(2019-2020)

Congratulations Katia!!

## Major themes:

- The microbiome of the female reproductive tract is molded early in pregnancy in a population-specific fashion.
- Significant and reproducible signatures predictive of risk of preterm birth are present in the microbiome of the reproductive tract of pregnant women.
- These microbial signatures appear early in pregnancy in a population specific way.
- These microbial signatures, coupled with other multi omic and clinical observations may provide means to intervene in and prevent prematurity in a population specific fashion.