



## NIDDK P30 Center for Molecular Studies in Digestive and Liver Diseases Research Seminar



### **Maayan Levy, PhD**

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University of Pennsylvania

### *" Metabotherapy for Intestinal Disease*

Thursday, March 17, 2022

12:00 – 1:00 PM EST

[Zoom Link](#)

### **ABOUT THE LEVY LAB**

Our global interest at the Levy lab is to understand the communication between the microbiome and the host, focusing on intestinal epithelial cells as mediators of this interaction. Our main focus is on the gastrointestinal tract, which contains the highest density of microorganisms on Earth. It is therefore intriguing that merely a single layer of epithelial cells separates the microbial community from the sterile host. Our goal is to decipher how this single layer of intestinal epithelial cells performs the tightrope walk between host defense against microbial invasion and nutrient absorption. Failure to perform this critical task results in barrier permeability and ensuing chronic inflammatory diseases.

Using state of the art technologies, gnotobiotic mice, high throughput metabolic screening and next-generation sequencing, we aim to elucidate new mechanistic aspects of host-microbiome communication. In the lab we also study the idea that the metabolic and immune functions of epithelial cells are not uncoupled, but actually parts of the same intracellular circuits. The enormous biochemical repertoire of the intestinal microbiome exposes the intestinal epithelium to a large variety of metabolites, but very little is known about how epithelial cells integrate these metabolites into intracellular metabolic circuits to initiate appropriate regulatory responses. Our goal is to unravel the influence of microbial metabolites on epithelial metabolism, immune response, and epithelial host defense.

The meeting will start promptly at 12:00 pm. Please be on time.  
Everyone inside and outside of the division is welcome to attend.