

# MCW Center for Microbiome Research Seminar Series 2020-2021

Seminars are Tuesdays at 11:00AM. All seminars were held virtually via Zoom.

April 6, 2021

**Mariana Byndloss, DVM, PhD**

Assistant Professor, Depts. of Pathology, and Microbiology & Immunology, Vanderbilt University

*Gut Epithelial Metabolism as a Key Driver of Dysbiosis Associated with Non-Communicable Diseases*

A joint presentation with the MCW Department of Microbiology & Immunology

May 18, 2021

**Laura-Isobel McCall, PhD**

Assistant Professor, Department of Chemistry and Biochemistry, University of Oklahoma

*Chemical Cartography of Host-Microbe Interactions: Differentiating Between Local and Systemic Effects of Infection*

A joint presentation with the MCW Department of Microbiology & Immunology

Please contact the Center for Microbiome Research for  
additional information at [biomecenter@mcw.edu](mailto:biomecenter@mcw.edu)



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MICROBIOME RESEARCH

# MCW Center for Microbiome Research

## Seminar Series

### 2020-2021

## **“Gut Epithelial Metabolism as a Key Driver of Dysbiosis Associate with Non- Communicable Diseases”**

Mariana Byndloss, DVM, PhD

*Assistant Professor, Depts. of Pathology,  
and Microbiology & Immunology  
Vanderbilt University*



April 6, 2021

11am – 12 noon

Livestream on Zoom

Our group uses a multidisciplinary approach combining microbiology, molecular biology, cell biology, immunology, and pathology to understand how inflammation-dependent changes in gut epithelial metabolism can result in gut dysbiosis and increased risk of non-communicable disease. Specifically, we used various mouse models, including diet-induced-obesity, chemical-induced colitis, and germ-free animals, to identify metabolic pathways in the gut bacteria and in the host response to microbiota-induced metabolites that will aid in the prevention of human disease.

To learn more, visit:

<https://www.vumc.org/byndloss-lab/byndloss-laboratory>



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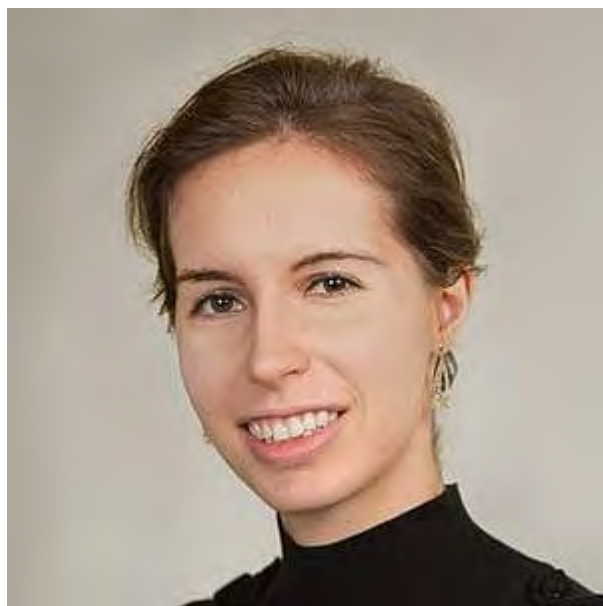
# MCW Center for Microbiome Research

## Seminar Series

### 2020-2021

## “Chemical Cartography of Host-Microbe Interactions: Differentiating Between Local and Systemic Effects of Infection”

Laura-Isobel McCall, PhD  
*Assistant Professor, Department of  
Chemistry and Biochemistry  
University of Oklahoma*



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We use our chemical cartography approach to understand the spatial context of disease development, by investigating the chemical interplay between mammalian hosts, their environment and microorganisms in 3D. Using mass spectrometry-based metabolomics, combined with big data statistical tools and three-dimensional modeling, we place molecules in their spatial context and link them to microbial community composition and human health.

To learn more, visit:

<http://mccall-lab.oucreate.com/>



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