



MMI 291 Seminar Series

Current Theme: Interdisciplinary Research

Spring Quarter 2021 – CRN 51367

Friday Seminar – 12:10-1 p.m.



“Disruption of microbiota and intestinal epithelial interactions during early-life promotes obesity”

Research / Bio

Dr. Mariana Byndloss is native of Brazil. She earned her DVM and MSc in Veterinary Pathology from Universidade Federal de Minas Gerais (UFMG) in Brazil. Her doctoral work performed at UFMG and UC Davis was awarded the Brazilian National Prize for best PhD thesis in Veterinary Medicine. She performed her postdoctoral training in Dr. Andreas Bäumler's laboratory at UC Davis studying the link between ER stress and innate immunity as well as the interactions between the host and intestinal microbiota during dysbiosis. Her research aims to understand how detrimental environmental factors (e.g., obesogenic diet and antibiotics) disrupt the beneficial interactions between the gut microbiota and the intestinal epithelium, leading to an increased risk of obesity and inflammatory bowel disease.

Publications

Shelton CD, Byndloss MX. Gut Epithelial Metabolism as a Key Driver of Intestinal Dysbiosis Associated with Noncommunicable Diseases. *Infect Immun.* 2020 Jun 22;88(7):e00939-19. doi: 10.1128/IAI.00939-19. PMID: 32122941; PMCID: PMC7309626.

Byndloss MX, Olsan EE, Rivera-Chávez F, Tiffany CR, Cevallos SA, Lokken KL, Torres TP, Byndloss AJ, Faber F, Gao Y, Litvak Y, Lopez CA, Xu G, Napoli E, Giulivi C, Tsolis RM, Revzin A, Lebrilla CB, Bäumler AJ. Microbiota-activated PPAR- γ signaling inhibits dysbiotic *Enterobacteriaceae* expansion. *Science.* 2017 Aug 11;357(6351):570-575. doi: 10.1126/science.aam9949. PMID: 28798125; PMCID: PMC5642957.

Cevallos SA, Lee JY, Velazquez EM, Foegeding NJ, Shelton CD, Tiffany CR, Parry BH, Stull-Lane AR, Olsan EE, Savage HP, Nguyen H, Ghanaat SS, Byndloss AJ, Agu IO, Tsolis RM, Byndloss MX, Bäumler AJ. 5-Aminosalicylic Acid Ameliorates Colitis and Checks Dysbiotic *Escherichia coli* Expansion by Activating PPAR- γ Signaling in the Intestinal Epithelium. *mBio.* 2021 Jan 19;12(1):e03227-20. doi: 10.1128/mBio.03227-20. PMID: 33468700; PMCID: PMC7845635.

April
23



Mariana X Byndloss, DVM, PhD
Assistant Professor
Department of Pathology
Microbiology and Immunology
Vanderbilt University Medical Center

April 23, 2021
12:10 – 1 p.m.
ZOOM Meeting

Medical Microbiology
& Immunology
School of Medicine

Seminar Contact:
Autumn Vega
530-752-9401
advega@ucdavis.edu

We hope to see you there!