

## MMI 291 Seminar Series

Current Theme: Interdisciplinary Research  
Winter Quarter 2023 – CRN 33382

Friday Seminar at 12:10-1 p.m.  
GBSF Auditorium, Room 1005

“Increasing fiber in dairy cow feed is associated with altered milk composition which may support a more beneficial milk microbial community for cows and humans”

### Research / Bio

**Dr. Laurynne Coates** is a postdoctoral fellow in Dr. Mary Kable’s lab at the USDA Western Human Nutrition Research Center in Davis, CA. She studies the microbes found in raw bovine milk in relation to feed interventions and milk components as part of the USDA Dairy Grand Challenge project. She also studies the infant gut microbiome in relation to morbidity outcomes as part of the Mother Infant Lactation Quality project. She received her Ph.D. in microbiology from UC Davis in 2020 with the mentorship of Dr. Carolyn Slupsky. During graduate school, Laurynne studied the impacts of the citrus greening disease bacterial pathogen, ‘*Candidatus Liberibacter asiaticus*’, on the adult insect vector of the disease, *Diaphorina citri*. Laurynne has experience analyzing and integrating omics datasets to develop a more comprehensive picture of the potential molecular processes involved in host-bacteria symbiosis or the impact of maternal nutrition on milk microbes, as well gut microbes associated with infant gastroenteritis. Laurynne’s research interests broadly include the mechanisms contributing to the beneficial effects of milk on infant gut microbiome development and associated health outcomes in infancy and beyond.

### Publications

**Coates LC**, Storms D, Finley JW, Fukagawa NK, Lemay DG, Kalscheur KF, Kable ME. “A Low-Starch and High-Fiber Diet Intervention Impacts the Microbial Community of Raw Bovine Milk”. *Curr Dev Nutr.* 2022;6(6):nzac086. doi: 10.1093/cdn/nzac086

**Coates LC**, Durham S, Storms D, Magnuson A, Van Hekken D, Plumier B, Finley J, Fukagawa N, Tomasula P, Lemay DG, Picklo M, Barile D, Kalscheur KF, Kable ME. “Associations among milk microbiota, milk fatty acids, milk glycans, and inflammation from lactating Holstein cows”. *Microbiology Spectrum.* 2023; e0402022. doi: 10.1128/spectrum.04020-22.

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**Laurynne Coates, Ph.D.**  
Postdoctoral Research Microbiologist  
US Department of Agriculture (USDA)  
Agricultural Research Service (ARS)  
University of California, Davis

February 2, 2024  
12:10 – 1 p.m.  
GBSF Auditorium  
Room 1005  
In-person presentation

Medical Microbiology  
and Immunology  
School of Medicine

Seminar Contact:  
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530-752-9401

We hope to see you there!