

MMI 291 Seminar Series

Current Theme: Interdisciplinary Research
Fall Quarter 2023 – CRN 41342

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

“Targeting crosstalk between gut microbes and the environment to prevent gastrointestinal cancers.”

Research / Bio

Dr. Christopher Gaulke is an assistant professor in the Department of Pathobiology at the University of Illinois Urbana Champaign. He received his Ph.D. in Microbiology from the University of California Davis, working on the viral pathogenesis and viral interactions with the gut innate immune system and commensal microbes. He received postdoctoral training at Oregon State University for developing computational approaches to manage, analyze, and integrate massive volumes of multi'omics sequence data. Dr. Gaulke's research spans clinical and basic sciences leveraging high-throughput screens, statistical modeling, and cutting-edge molecular techniques to identify stimuli capable of disturbing the taxonomic, genetic, and metabolic composition of mucosal microbiomes. By integrating host physiological and immunological measures in these studies, they detect interactions between microbiome operation and host physiology that underpin health and disease with the ultimate aim of applying this information to develop microbe based therapeutic interventions.

Publications

Gaulke CA, Schmeltzer ER, Dasenko M, Tyler BM, Vega Thurber R, Sharpton TJ. April 2021. "Evaluation of the effects of library preparation procedure and sample characteristics on the accuracy of metagenomic profiles". *mSystems* 6:e00440-21. <https://doi.org/10.1128/mSystems.00440-21>.

Christopher A. Gaulke, Mauricio L. Martins, Virginia G. Watral, Ian R. Humphreys, Sean T. Spagnoli, Michael L. Kent, and Thomas J. Sharpton. "A longitudinal assessment of host- microbe/parasite interactions resolves the zebrafish gut microbiome's link to *Pseudocapillaria tomentosa* infection and pathology". *Microbiome* 2019 <https://doi.org/10.1186/s40168-019-0622-9>

December
1



Christopher Gaulke
Assistant Professor
Department of Pathobiology
University of Illinois
Urbana-Champaign

December 1, 2023
12:10 – 1 p.m.
GBSF Auditorium
Room 1005
In-person presentation

Medical Microbiology
and Immunology
School of Medicine

Seminar Contact:
Autumn Vega
530-752-9401

We hope to see you there!