

Medical Microbiology and Immunology

MMI 291 Seminar Series

Emerging Challenges in Microbiology and Immunology

Current Theme: Interdisciplinary Research



Susan Lynch, Ph.D.

Professor

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“Canary in the Coalmine: The Neonatal Gut Microbiome and Childhood Atopy and Asthma”

Friday, October 5, 2018

Genome and Biomedical Sciences Facility, Auditorium Room 1005

12:10 PM – 1:00 PM

Research work: Dr. Lynch applies classical principals of microbial physiology and ecological theory to improve understanding of the gut microbiome, it's genesis, establishment and influence on human immunity. She has demonstrated the existence of a gut-airway axis, discovered that environmental microbial exposures influence microbiome composition and immune function, and identified gut microbial-derived molecules that shape early-life immunity and disease susceptibility.

Publication references:

Fujimura K.E., Demoor T, Rauch M, Faruqi AA, Jang S, Johnson CC, Boushey HA, Zoratti E, Ownby D, Lukacs NW, LynchSV. House dust exposure mediates gut microbiome Lactobacillus enrichment and airway immune defense against allergens and virus infection. Proc Natl Acad Sci U S A. 2014 Jan 14;111(2):805-10. PMC ID: PMC3896155.

Fujimura KE, Sitarik AR, Havstad S, Lin DL, Levan S, Fadrosch D, Panzer AR, LaMere B, Rackaityte E, Lukacs NW, Wegienka G, Boushey HA, Ownby DR, Zoratti EM, Levin AM, Johnson CC, Lynch SV. Neonatal gut microbiota associates with childhood multisensitized atopy and T cell differentiation. Nat Med.2016 Oct;22(10):1187-1191. doi: 10.1038/nm.4176. PMC ID: PMC5053876.