



CHINESE-AMERICAN LUNG ASSOCIATION



CALA Happy Friday Seminar

April 22nd, 2022

Time: EST 10:30 am; PST: 7:30 am; Beijing time: 10:30pm

Zoom: 849 9682 9273 (Password: 654321)

Transcriptional and Metabolic Regulation of Host Immune Responses



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Professor

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Bio: Liang Zhou, MD, PhD, is a Professor in the Department of Infectious Diseases and Immunology (ID&I). Dr. Zhou received his MD from Nanjing Medical University (NMU), China, in 1996 and his PhD from the University of California, Los Angeles, Department of Microbiology, Immunology, and Molecular Genetics in 2004. Dr. Zhou is a molecular immunologist with specialization in two major areas: mucosal immunity and lymphocyte development/differentiation. His research focuses on environmental impact (e.g., microbes and dietary components) on host immunity, especially in mucosal tissues. The majority of his research utilizes mouse genetic models, molecular and cellular immunological approaches, and genome-based technologies. In 2015, Dr. Zhou moved to the University of Florida from Northwestern University as part of UF's Preeminence Initiative in Mucosal Immunology.

Abstract: The goal of the Zhou laboratory is to determine the transcriptional regulation of mucosal immune responses, especially in the gut. We have characterized the interactions between various transcription factors (e.g., ROR γ t and Foxp3) involved in specifying development of Th17 cells and the related iTreg lineage as well as how these interactions eventually determine whether the T cell adopts the Th17 or Treg cell fate. We have been focusing on the molecular regulation of T cells and innate lymphoid cells (ILCs) by the aryl hydrocarbon receptor (Ahr), a ligand-dependent transcription factor under steady-state physiological conditions, during inflammation or autoimmunity. Most recently, we have extended our studies to host-microbe interactions and metabolic regulation of mucosal immune responses. Our research has implications for understanding how to modulate intestinal immune responses in different disease settings, and it may ultimately lead to the identification of new therapeutic targets for human diseases such as infectious diseases, IBD and colon cancer.