CALA Happy Friday Seminar

June 24th, 2022

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

Zoom: 849 9682 9273 (Password: 654321)

Xiangming Ji, PhD
Assistant Professor
Georgia State University, Atlanta, GA

Bio: Xiangming Ji, PhD, is an Assistant Professor in the Department of Nutrition. Dr. Ji received his Ph. D from Wayne State University, Detroit, MI, in 2012. After that, he has been working as postdoc fellow at Vanderbilt University Medical Center. Dr. Ji is a molecular biochemist with specialization in lung disease early detection. His research focuses on metabolic studies in the airway epithelium from normal cells to at-risk epithelial cells all the way to cancer cells. The majority of his research is utilizing a stable isotope tracer to monitor metabolic reprogramming in the airway epithelial compartment at the core of the development of lung diseases such as CF, COPD, and lung cancer. In 2017, Dr. Ji moved to the Georgia State University as an assistant Professor.

Abstract: The goal of the Ji laboratory is to determine the metabolic reprogramming due to the exposure of E-cigarette and traditional cigarette smoking. We employed βENaC-overexpressing mice bearing COPD-like pulmonary abnormality and exposed them to ENDS. We found that ENDS exposure aggravated airspace enlargement and mucus production in βENaC- overexpressing mice, which was associated with increased MMP12 and Muc5ac, respectively. Plasma from non-smoker controls, cigarette smokers, and END users was collected, and metabolites were identified by UPLC-MS (ultra-performance liquid chromatography mass spectrometer). We found END vaping dysregulated TCA cycle-related metabolites while cigarette smoking altered sphingolipid metabolites.