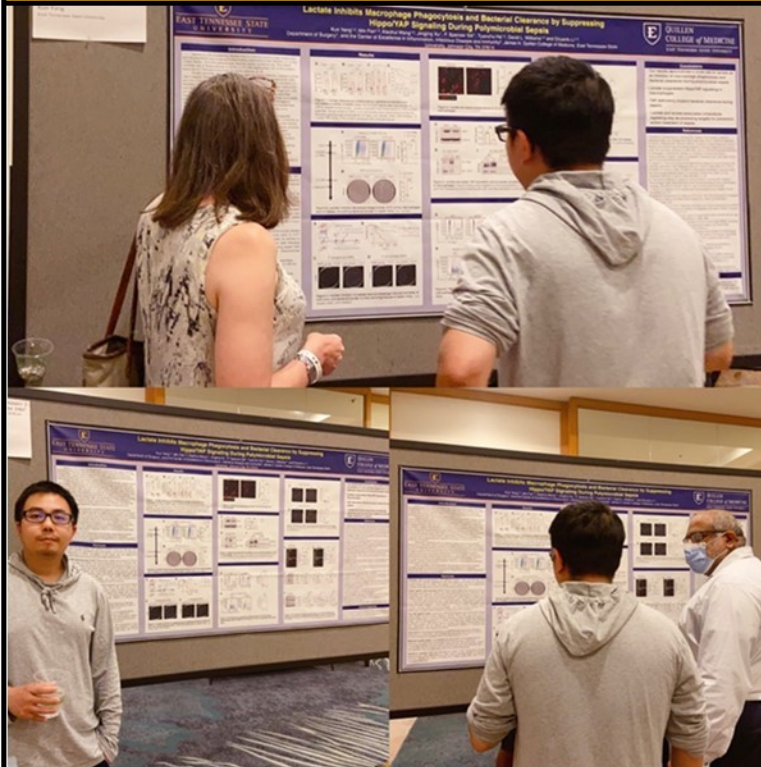




CENTER of EXCELLENCE
in INFLAMMATION, INFECTIOUS
DISEASE and IMMUNITY

EAST TENNESSEE STATE UNIVERSITY

Dr. Kun Yang Presents Poster at Society for Leukocyte Biology Conference



Dr. Kun Yang, a Research Assistant Professor in Quillen College of Medicine's Department of Surgery, presented "Lactate Inhibits Macrophage Phagocytosis and Bacterial Clearance by Suppressing Hippo/YAP Signaling During Polymicrobial Sepsis" at the 2022 Society for Leukocyte Biology (SLB) conference in Hawaii. The (SLB) is an inclusive global community of like-minded scientists in the field of leukocyte research and far-reaching related disciplines.

Sepsis is a life-threatening disease that is characterized by organ dysfunction and dysregulated host innate and inflammatory responses to an infection. The defective eradication of invading bacterial or other pathogens is a major cause of multiple organ dysfunction and death in sepsis. Elevated blood lactate levels are associated with severity and mortality of sepsis. Macrophages are professional phagocytes and actively engulf/kill microorganisms. Dr. Yang observed that elevated serum lactate levels impair bacterial clearance in septic mice and increased mortality rate of septic mice. Mechanistic studies further demonstrated that Hippo/YAP signaling is involved in lactate-suppressed macrophage phagocytosis. Dr. Yang stated that, "These findings, combined with our previous work, indicate a novel role of lactate in inhibiting macrophage phagocytosis and bacterial clearance during polymicrobial sepsis. Therefore, lactate/lactate-associated signaling may be promising target for sepsis treatment."

Dr. Yang is a member of Professor Chuanfu Li's lab in the Department of Surgery and is a member of the Center of Excellence in Inflammation, Infectious

Disease, and Immunity. This work was supported by National Institutes of Health grants HL071837 (Chuanfu Li), HL153270 (Chuanfu Li), GM083016 (Chuanfu Li & David L. Williams), GM119197 (David L. Williams), C06RR0306551 (ETSU), American Heart Association Predoctoral Fellowship 20PRE35120345 (Min Fan), and Shock Society Research Investigator Fellowship (Kun Yang).