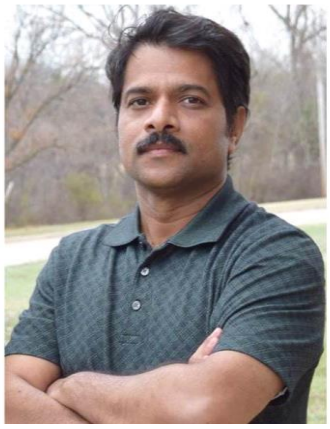
NARASARAJU TELUGU AKULA



Education:

PhD 2001. Microbiology, Osmania University, India.

Research Interests:

Influenza Virus Pathogenesis and Therapy

SARS-COV-2 Pathogenesis and Therapy

Bacterial Pneumonia

I have been working on 'respiratory and infectious diseases' throughout my research career. Highly pathogenic influenza virus infections are associated with acute lung injury (ALI), respiratory distress, and multi-organ failure. Both host- and virus-mediated factors contribute to ALI in severe influenza. My lab has been focussing on understanding innate immune regulations in influenza pathophysiology. My research findings highlight that excessive neutrophils recruited during influenza, contribute to immunopathology and ALI, through neutrophil extracellular traps (NETs) induction, release of extracellular histones (ECH) and formation of neutrophil-platelet aggregates (NPAs). These inflammatory and thrombotic responses lead to pathologic manifestations of acute respiratory distress syndrome (ARDS) in severe influenza. Similarly, we have also found potential deleterious effects of NETs and ECH in *Streptococcus pneumoniae* superinfection following influenza. Most recently, we found a pathogenic link of NETs in *Francisella tularensis* among naturally infected rabbits and cats as well as murine model of pneumonic tularemia. The long-term goals of our lab is to investigate and develop novel drugs that alleviate ARDS in viral and bacterial infections. Before joining ACU, I have spent 5 years at the National University of Singapore, and 15 years at the Oklahoma State University, USA as a Professor.

Selected Publications:

1. Ackermann M, etal., Patients with COVID-19: in the dark-NETs of neutrophils. ***Cell Death Differ***. 2021 May 24:1-15. doi: 10.1038/s41418-021-00805-z.
2. Ashar HK, et al., Administration of a CXCR2 antagonist, SCH527123 together with oseltamivir suppresses NETosis and protects mice from lethal influenza and piglets from swine-influenza infection. ***American Journal of Pathology*** 2021: 191:669-685.
3. Narasaraju T. Neutrophils set extracellular traps to injure lungs in COVID-19. Editorial Commentary. ***Journal of Infectious Diseases***. 2021; 223:1503-1505.
4. Narasaraju T. Commentary on "Histopathologic Changes and SARS–CoV-2 Immunostaining in the Lung of a Patient With COVID-19". ***Annals of Internal Medicine.*** 'Letter to the Editor' 2020; 173:323-324.

Google Scholar citations: 2780, h-index: 27; i-index: 32.