**TITLE:** Long-term Organ Dysfunction After Severe Sepsis

**FACULTY MENTOR:** Faheem Guirgis MD  
Assistant Professor of Emergency Medicine  
Email: faheem.guirgis@jax.ufl.edu  
Phone: 904-244-4986

**RESEARCH PROJECT DESCRIPTION** (brief overview of background, hypothesis, methods, role of medical student, funding and relevant publications)

Severe sepsis is a commonly encountered life threatening condition with approximately 30% mortality. Severe sepsis occurs when infection leads to systemic inflammatory response resulting in decreased blood flow to end-organs, as indicated by a lactate level > 4mg/dl or end organ dysfunction. Septic shock occurs when sepsis is accompanied by hypotension not responsive to fluid resuscitation. Protocolized sepsis care has reduced mortality significantly in the last 10 years, but studies have shown that with the reduction in mortality there has been an increase in acute morbidity; particularly organ-dysfunction and multi-organ failure. Few studies have evaluated long-term organ dysfunction in survivors of severe sepsis. This project will involve long-term follow up of patients treated for severe sepsis or septic shock with a quantitative resuscitation protocol in the emergency department (ED). Patients surviving beyond 28 days who have returned to our facility since study enrollment will be followed up for the presence of persistent or long-term organ dysfunction after an episode of severe sepsis. Student participants will be educated in sepsis criteria, treatment guidelines, and criteria for sepsis-related organ dysfunction in order to assist with chart reviews. Students will also receive bedside instruction in the recognition of severe sepsis in ED patients and will learn to screen and accurately identify patients with severe sepsis and septic shock in the ED. Students with an interest in Emergency Medicine or Critical Care Medicine are encouraged to apply. Funding was provided by a University of Florida Faculty Dean's Grant.

Relevant Publications:
Persistent Organ Dysfunction After Severe Sepsis: A Systematic Review. **Guirgis FW,** Khadpe JD, Kuntz G, Wears RL, Kalynych CJ, Jones AE. Accepted for publication to Journal of Critical Care.