Title: Understanding skin host defense in health and disease

The inflammatory response elicited during skin infection must be tightly regulated to properly control bacterial growth, while inducing appropriate acute inflammation and triggering tissue remodeling after the elimination of the bacteria. In preexisting diseases, such as diabetes, phagocytes show poor antimicrobial effector function but are hyperresponsive to pathogens, which could contribute to tissue injury observed in diabetes. Our laboratory studies the role of lipid mediators that play a critical role in both the initiation and resolution of the inflammatory response during skin infections in models of diabetes. We will discuss the initial events that lead to abscess formation (or lack of) during Staphylococcus infection, the mechanisms by which macrophages influence neutrophil migration to the site of infection and events that lead to the clearance of dead cells as part of the resolution of the inflammatory response.