

Biography

My research interest centers around cardiac physiology, metabolism, islet signaling, and G-Protein Coupled Receptors (GPCRs). During my graduate research in the lab of Mario Delmar, I studied the role of plakophilin-2 (PKP2) in arrhythmogenic cardiomyopathy. I discovered a novel functional link between PKP2 and the sodium channel Nav1.5, and I identified a molecular complex formed by PKP2, Nav1.5, ankyrin-G, and connexin-43 that affects cardiac electrical conductance. As a post-doctorate fellow in the lab of Walter Koch, my research focused on the non-canonical localization of GPCR kinase 2 (GRK2) in the mitochondria. My work supported the notion that upregulation of GRK2 plays a detrimental role in modulates substrate utilization. My group is currently invested in studying new mechanisms that alter metabolic signaling and cardiac function, particularly as it relates to diabetes, HFpEF, and HFrEF.