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**Research Interest:**

The primary research in my lab involves the understanding of the mechanisms of myocardial dysfunction. We utilize a wide range of approaches ranging from cellular, molecular biology to in vivo physiology. Cultured cardiomyocytes and isolated whole hearts are used to study the molecular mechanisms of myocardial dysfunction and the role of key genes/proteins in this process. To assess the physiological significance of each molecule, related knockout or transgenic and wild-type animals are employed.

Current research is focused on sepsis-induced myocardial dysfunction. We study the signal transduction mechanisms in cardiomyocytes in response to lipopolysaccharide, an important pathogen for sepsis, and the regulation of myocardial injuries during sepsis.

Another research is focused on diabetic cardiomyopathy. We are investigating the molecular mechanisms of hyperglycemia-induced cardiomyocyte injuries and developing the therapeutical strategies to protect the heart from injury as the heart has limited ability to regenerate its damaged tissue.