

Dr. Purcell joined HMRI in 2021 as Associate Professor of Cardiovascular Signaling and serves as Scientific Director of HMRI's Education Programs. Dr. Purcell's research career has focused primarily on the regulation of signal transduction pathways in cardiovascular physiology and pathology with a concentration on cardiac hypertrophy and failure induced by pressure overload and ischemic damage. The laboratory found that a newly discovered phosphatase, PHLPP, negatively regulates Akt activity and survival in the heart. The research focus is to further understand through removal of PHLPP, its isoform specificity for Akt and target substrates following aging and cardiac injury and determine the potential for PHLPP as a target for therapeutic strategies to improve cardiac function. A second area of interest involves investigating the role of PHLPP in astrocyte signaling and cerebral ischemia.