SUMMARY: This technology describes the creation of a novel and more accurate mouse model of heart failure with a preserved ejection fraction.

Heart failure (HF) is the most prevalent form of cardiac disease in the US. It is defined as the condition in which the heart cannot pump enough blood to meet the body’s demands. There are two forms of heart failure: 1) systolic heart failure occurs when the heart does not contract with enough force, therefore, less oxygen rich blood is pumped throughout the body; and 2) diastolic heart failure or heart failure with a preserved ejection fraction (HFpEF) occurs when the heart contracts normally but the ventricles do not relax properly and less blood enters the heart during normal filling.

There are currently human relevant, animal models and 7 approved drugs for the treatment of HF. The one and only published HFpEF model does not accurately recapitulate the metabolic phenotype of human disease. Approximately 50% of HFpEF patients are diabetic, obese, and diagnosed with arterial hypertension. This technology describes the creation of a mouse model of HFpEF that also recapitulates the metabolic aspects of this human disease.

Please contact the Office for Technology Development for more details:

Phone: 214-648-1888
Email: TechnologyDevelopment@utsouthwestern.edu

Please reference UT Southwestern Case Number: 3097