Key questions defining research program:

- What mechanisms underlie cardiac arrhythmias?
- Why is the female sex at greater risk of arrhythmias during repolarization delays?
- How do sex hormones modify cardiac ion channels?
- What is the role of the conduction system in initiating/maintaining arrhythmias?
- What mechanisms explain the cardioprotective actions of Relaxin?

Key words describing research program:

- Optical mapping of action potentials and intracellular Calcium
- RNA-Seq analysis of aged hearts and the genomic effects of Relaxin
- Voltage-clamp experiments to measure changes in ion channel expression
- RT-PCR of human ventricular tissue ± Relaxin treatment
- Confocal imaging-Immuno-fluorescence

Titles for shovel-ready research projects:

- Genomic actions of Relaxin in aged hearts
- RV remodeling in PAH ± Relaxin treatment
- Western blot analysis of ventricular muscles (men vs. women and pre-vs. post menopause)

Data sources for shovel-ready research projects:

- RNA Seq data and visualization tools