Key questions defining research program:
1) What mechanisms underlie cardiac arrhythmias?
2) Why is the female sex at greater risk of arrhythmias during repolarization delays?
3) How do sex hormones modify cardiac ion channels?
4) What is the role of the conduction system in initiating/maintaining arrhythmias
5) What mechanisms explain the cardioprotective actions of Relaxin?

Key words describing research program:
1) Optical mapping of action potentials and intracellular Calcium
2) RNA-Seq analysis of aged hearts and the genomic effects of Relaxin
3) Voltage-clamp experiments to measure changes in ion channel expression
4) RT-PCR of human ventricular tissue ± Relaxin treatment
5) Confocal imaging-Immuno-fluorescence

Titles for shovel-ready research projects:
1) Genomic actions of Relaxin in aged hearts
2) RV remodeling in PAH ± Relaxin treatment
3) Western blot analysis of ventricular muscles (men vs. women and pre-vs. post menopause)

Data sources for shovel-ready research projects:
1) RNA Seq data and visualization tools