Key questions defining research program:
1) What are the molecular mechanisms driving pulmonary hypertension?
2) What are the molecular mechanisms driving the adaptation to hypoxia?
3) What are the molecular mechanisms driving the adaptation to exercise?
4) How can we use computational and quantitative modeling to predict molecular or clinical pathophysiology in pulmonary vascular disease?
5) How do non-coding RNAs control vascular function?

Key words describing research program:
1) Pulmonary hypertension
2) Hypoxia
3) Exercise
4) Systems biology
5) Non-coding RNAs

Titles for shovel-ready research projects:
1) How do microRNAs control adaptation to exercise in the pulmonary vasculature?
2) How are circulating microRNAs dynamically regulated in pulmonary hypertension?
3) Studying the natural history of pulmonary hypertension utilizing big data analytics

Data sources for shovel-ready research projects:
1) See lab website for details: www.sychanlab.pitt.edu