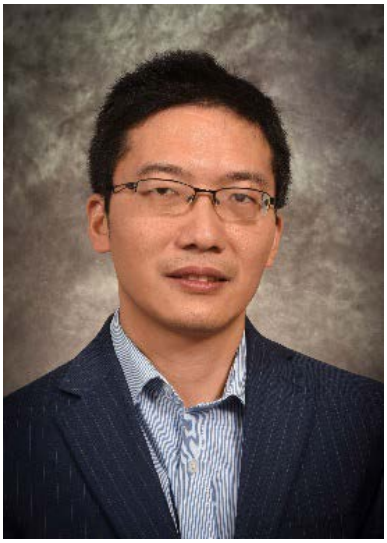
Qing Zhang Awarded NIH R01 Grant



Dr. Qing Zhang and his group have been awarded an R01 grant titled “Genome-wide CRISPR screening identifies critical regulators controlling ccRCC lung metastasis” from the National Institutes of Health (NIH) to advance research on kidney cancer metastasis. This prestigious award underscores Dr. Qing Zhang's groundbreaking work in understanding clear cell renal cell carcinoma (ccRCC), the most common type of kidney cancer.

The awarded project focuses on the role of Hepatic Leukemia Factor (HLF) in suppressing lung metastasis in ccRCC. Lung metastasis remains a significant challenge in kidney cancer treatment, with survival rates plummeting to 10-15% in patients with distant metastasis. Dr. Zhang’s research leverages cutting-edge CRISPR screening and molecular analysis to explore HLF’s function and its downstream targets, offering a pathway toward novel therapeutic strategies.

The research, structured around two specific aims, seeks to:

1. Characterize the functional role of HLF in ccRCC lung metastasis.
2. Decipher the molecular mechanisms by which HLF loss facilitates metastatic progression.

Preliminary studies have already revealed that HLF acts as a key suppressor of metastasis, with its loss promoting lung metastasis in vivo. Additionally, HLF appears to regulate critical genes like CD44 and ICAM2, highlighting its potential impact on therapeutic development. The findings from this research are poised to significantly enhance the understanding of kidney cancer metastasis and pave the way for innovative interventions targeting metastatic progression.

Dr. Zhang, Professor of Pathology, is Director of Investigative Pathology, Chief Scientific Officer (CSO) of the Breast Cancer Research Program in the Simmons Cancer Center, and Co-Director of the Career Enhancement Program in the Kidney Cancer Program.

To learn more about the Zhang lab: Zhang (Qing) Lab | UT Southwestern, Dallas, Texas.