The Xin Lab is interested in using the prostate as a tissue model to study the molecular and cellular mechanisms that regulate development, tissue homeostasis and carcinogenesis. Currently, there are two major research focuses in the lab. The first research focus is to characterize the prostate epithelial lineage hierarchy. We seek to investigate how individual prostate epithelial lineages are maintained in adults by prostate stem cells or progenitors, and to identify master regulators that control adult prostate homeostasis. The second focus of the lab is to investigate the molecular and cellular basis of aggressive prostate cancer. We are interested in determining the function of disease-associated genes in prostate cancer initiation and progression, and characterizing the identity of the cells of origin for prostate cancer. The major approaches that we utilize are cell culture-based prostate stem cell assays, genetically engineered mouse models, and a prostate regeneration method.

https://www.washington.edu/urology/people/li-xin-ph-d/