



Frank McKeon, PhD

Professor

Biology and Biochemistry

*Clonogenic Epithelial Cell Variants Drive Inflammation and Fibrosis in Pediatric Crohn's*

Frank McKeon was born in New Haven, graduated from Pomona College, and did his doctoral work on cell cycle control with Marc Kirschner at UCSF. In his own lab at Harvard Medical School, McKeon continued on cell cycle control, mechanisms of T cell activation by NFATs, and discovered the p53 homolog p63 and demonstrated its role as a master regulator of stem cells in all stratified epithelia. Teaming up with Dr. Wa Xian first at Harvard and then at the Genome Institute of Singapore and the Institute of Medical Biology in Singapore, they focused on technology development to clone normal stem cells of regenerative epithelia as well as those of cancers and precancerous lesions. They demonstrated the remarkable capacity of the lung to regenerate in studies involving H1N1 influenza virus and cloned the p63+ distal lung stem cell responsible for this process. In the area of cancer, they showed that Barrett's esophagus arises from a unique stem cell at the GE junction present in all individuals and more recently have cloned patient-matched stem cells for Barrett's, dysplasia, and esophageal adenocarcinoma. Since arriving in Houston in 2015 with the generous support of CPRIT, Xian and McKeon have expanded their studies in multiple cancers as well as towards identifying pathogenic stem cells that drive chronic inflammatory conditions such as COPD, cystic fibrosis, and inflammatory bowel disease in efforts involving multiple key collaborators. They live in Sugar Land with their three children, their maternal grandparents, and many lizzards.