



Chenghang (Chuck) Zong, PhD

Assistant Professor

Molecular and Human Genetics

Baylor College of Medicine

Characterization of Cancer Evolution Landscape Based on Accurate Detection of Somatic Mutations in Single Tumor Cells

Dr. Zong's research focuses on the development of various single-cell analysis tools, in particular, single-cell whole genome sequencing methods for characterizing genome variations among individual cells. His lab developed the first single-cell WGA method to profile spontaneous DNA damage level and distribution in single cells. His lab also developed the first total-RNA based single-cell RNA-seq method (MATQ-seq). His lab further developed the MATQ-drop platform for high-throughput profiling of single cells and more importantly, transcriptome profiling of individual synaptosomes. Besides method development, his lab also focuses on tumorigenesis and tumor evolution processes and they are expanding the research into constructing brain connectome and understanding the roles of synapses in the context of neurological diseases.