

# BISB BOOTCAMP SUMMER SEMINAR SERIES

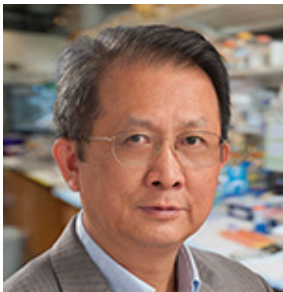
July 8th, 2021 | 12:00 PM PST – 1:00 PM PST

**Zoom ID:** 969 2714 6510  
**Password:** binfobuds



## COMPUTATIONAL APPROACHES TO THE UNDERSTANDING AND TREATMENT OF CANCER Jill Mesirov, Ph.D.

Research in the Mesirov Lab focuses on cancer genomics and applying machine-learning methods to functional data derived from patient tumors. The lab analyzes these molecular data to determine the underlying biological mechanisms of specific tumor subtypes, stratify patients according to their relative risks of relapse, and identify candidate compounds for new treatments. The overall goal is to treat patients as individuals specific to their tumors. Notably, the lab is committed to developing practical, accessible software tools to bring these methods to the general biomedical research community. These software tools support over 500,000 users worldwide.



## SCRNA-SEQ ANALYSIS OF LIVER DEVELOPMENT AND LIVER CANCER Gen-Sheng Feng, Ph.D.

The elucidation of oncogenes and tumor suppressor genes has been a driving force in the cancer field for several decades. Recent studies have revealed the dual roles of genes in promoting and suppressing hepatocellular carcinoma (HCC). The focus of the Feng Lab is to decipher the "paradoxical" effects of these genes to aid the development of mechanism-based therapeutics for HCC. The lab focuses on delineating the genetic and epigenetic interactions that drive hepatocarcinogenesis. In particular, the lab is interested in isolating and characterizing cancer stem cells, CSCs (or tumor-initiating cells, TICs) in the liver, and dissecting the dynamic interplay between tumors and the hepatic microenvironment. They are also devoting efforts to understand metabolic changes in tumor cells and search for biomarkers for early diagnosis of liver cancers.