Harvard/MIT MD-PhD Program Presents:
Meet the Investigator Series

David Ting, M.D.
Assistant Professor of Medicine, Harvard Medical School; Assistant Physician, Massachusetts General Cancer Center

Recent analysis of pancreatic tumors has found a significant amount of “non-coding” RNAs being produced in cancer cells, but not in normal tissues that have provided new insight into this disease and has implications as novel early detection biomarkers. In addition, the Ting Laboratory has been utilizing innovative microfluidic chip technologies to capture circulating tumor cells (CTCs) in the blood of pancreatic cancer patients as a means to understand why pancreatic cancers spread so quickly and as a potential non-invasive tool to diagnose our patients earlier.

Vijay Sankaran, M.D., Ph.D.
Assistant Professor of Pediatrics, Harvard Medical School; Associate Member, Broad Institute of MIT and Harvard

The Sankaran Lab utilizes human genetics to refine our understanding of hematopoiesis and how this process goes awry in human disease. We are particularly interested in gaining molecular insight into how hematopoietic stem and progenitor cells are able to produce red blood cells, how the hemoglobin genes are regulated during this process, and how common variation in red blood cell traits can be due to alterations in normal hematopoiesis.

Douglas A. Melton, Ph.D.
Xander University Professor of Stem Cell and Regenerative Biology and Co-Chair of the Department of Stem Cell & Regenerative Biology, Harvard University

Research in our laboratory focuses on the developmental biology of the pancreas. We wish to understand how the pancreas normally develops and use that information to grow and develop pancreatic cells (islets of Langerhans). One goal is to understand how vertebrates make an organ from undifferentiated embryonic cells. A longer-term goal has practical significance: if our studies are successful, it should be possible to apply our conclusions to human cells and provide a source of insulin-producing beta-cells for diabetics.

Richard Born, M.D.
Professor of Neurobiology, Harvard Medical School

We seek to understand the circuitry of the mammalian cerebral cortex and how it endows us with the ability to see . . . and hear and think and talk. We study visual cortex of alert monkeys trained to report specific aspects of their visual experience. This allows us to define the neural correlates of specific percepts and then study their underlying mechanisms by activating or inactivating components of the circuit.