Welcome to the Brückner Lab

Cell Signaling, Microenvironment and Hematopoiesis

The Brückner laboratory is interested in how genetics and the environment work together to direct the development and homeostasis of animal tissues. Much of our research focuses on the blood-forming, or hematopoietic, system. We are excited to study how sensory inputs and the activation of the peripheral nervous system regulate stem cells, progenitors and self-renewing blood cells. The laboratory further investigates how molecular signaling pathways and their crosstalk direct specific cell behaviors. We address these questions using the simple invertebrate model organism Drosophila melanogaster, which is conserved with vertebrates in many cellular and molecular aspects and has many technical advantages, such as powerful genetics and tractable live imaging of the transparent larval stages.

Based at the University of California San Francisco, the Brückner laboratory is located in the Ray and Dagmar Dolby Regeneration Medicine Building of the Eli and Edythe Broad Center of Regeneration Medicine and Stem Cell Research, at UCSF Parnassus Heights Campus.