Hansen Lab

The Hansen lab at the Buck institute is focused on understanding the regulation of the basic cellular recycling process called autophagy and its role in organismal aging and age-related diseases. During autophagy, cellular components, including protein aggregates, are turned over, thus helping to maintain homeostasis of the cell. However, the process fails with age and it remains unclear how autophagy is regulated within individual cell types, as well as between different tissues in the organism.

Our primary model to study these important questions is the nematode *C. elegans*, which is an ideal model organism because it is short-lived, has multiple fully differentiated tissues, and is genetically tractable. The SPARC project will focus on understanding how autophagy and protein aggregation are interconnected in different tissues of the animal. Such basic research can help develop new hypotheses to test in more complex animals and ultimately facilitate the development of new therapeutic efforts against neurodegenerative disorders like Alzheimer's.