# Drosophila Melanogaster

Drosophila melanogaster is a widely used versatile model organism to understand many molecular and developmental processes common to higher eukaryotes. A prerogative for a good model system is to share higher physiology within the molecular pathways with humans, and it is remarkable that approximately 75% of genes associated with human diseases have Drosophila homologs and share similarities in their functions, which is of particular interest for medical researches. It shows other technical advantages over vertebrate models; such as easy to handle and inexpensive to culture in laboratory conditions, have a much shorter life cycle, high brood size and they can be genetically modified in numerous ways. On the basis of showing these features, the fly has been proven tremendously valuable as a model organism for understanding the pathogenesis involved in human disorders.

In the training, the participants learn to culture and maintain Drosophila melanogaster. Students are made to practice the preparation of culture medium as Drosophila melanogaster food. The students learn and practice the sex differentiation at pupae and fly stage and brain dissection of larvae and fly.

Further, participants also learn the neurobehaviour parameters such as climbing and jumping assay in flies. Neurobehaviour at larvae stage is also performed during the hands on.