

CHARACTERIZATION OF DROSOPHILA MELANOGASTER GLIA IN COMPARISON WITH VERTEBRATE GLIA

Summary

In comparison with vertebrates, the fruit fly, *Drosophila melanogaster*, has fewer glial cells and much lower glia to neuron ratio. Glia of *D. melanogaster* is also specified by a different molecular mechanism of differentiation. However, just as vertebrates glia, it is specialized for distinct functions depending on its type. There are four main types of glia in *D. melanogaster* nervous system: the surface glia, the cortex glia and the neuropil glia in CNS, as well as the peripheral glia in PNS.

Based on morphological and/or functional similarities (that have arisen independently and do not represent homologies), one can conclude that *D. melanogaster* glia share many common features with vertebrate glia. This article characterizes different types and sub-types of *D. melanogaster* glia in comparison with vertebrate astrocytes, oligodendrocytes, microglia and Schwann cells.