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.

LITERATURA


