

Publication**A multipotent transit-amplifying neuroblast lineage in the central brain gives rise to optic lobe glial cells in Drosophila****JournalArticle (Originalarbeit in einer wissenschaftlichen Zeitschrift)****ID** 1825435**Author(s)** Viktorin, Gudrun; Riebli, Nadia; Reichert, Heinrich**Author(s) at UniBasel** [Reichert, Heinrich](#) ;**Year** 2013**Title** A multipotent transit-amplifying neuroblast lineage in the central brain gives rise to optic lobe glial cells in Drosophila**Journal** Developmental Biology**Volume** 379**Number** 2**Pages / Article-Number** 182-194**Keywords** Drosophila, Neuroglioblast, Type II neuroblast, Glia, Optic lobe

The neurons and glial cells of the Drosophila brain are generated by neural stem cell-like progenitors during two developmental phases, one short embryonic phase and one more prolonged postembryonic phase. Like the bulk of the adult-specific neurons, most of glial cells found in the adult central brain are generated postembryonically. Five of the neural stem cell-like progenitors that give rise to glial cells during postembryonic brain development have been identified as type II neuroglioblasts that generate neural and glial progeny through transient amplifying INPs. Here we identify DL1 as a novel multipotent neuroglial progenitor in the central brain and show that this type II neuroblast not only gives rise to neurons that innervate the central complex but also to glial cells that contribute exclusively to the optic lobe. Immediately following their generation in the central brain during the second half of larval development, these DL1 lineage-derived glia migrate into the developing optic lobe, where they differentiate into three identified types of optic lobe glial cells, inner chiasm glia, outer chiasm glia and cortex glia. Taken together, these findings reveal an unexpected central brain origin of optic lobe glial cells and central complex interneurons from one and the same type II neuroglioblast.

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