

## **Molecular Determinants of the Differential Properties of Embryonic Oligodendrocyte Precursors and Adult NG2 Cells.**

**Speaker:**

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**Project description:**

Embryonic oligodendrocyte precursor cells (OPC) and adult NG2 cells represent two functionally specialized populations of a single macroglial cell type. As part of SPP 1757 we attempt to define and explain this heterogeneity. For that purpose, we will combine mouse mutants and high-throughput analyses to identify differential gene expression and microRNA signatures, use bioinformatics and system biology approaches to reconstruct regulatory networks, and deduce from these results nature and molecular cause of the differences between embryonic OPC and adult NG2. These will then be experimentally validated and special emphasis be placed on the role of Sox9. In collaboration with other SPP1757 groups we will extend our studies to include other aspects of OPC/NG2 cell heterogeneity. Our data will not only help to understand the behavior of both cell populations, but eventually allow us to alter NG2 cell properties with implications for cell replacement strategies in the adult CNS.

Quelle:

<https://gepris.dfg.de/gepris/projekt/255239957>