



Universität
Basel

Research Project

Regulation and lineage dynamics of adult neural stem cells

Third-party funded project

Project title Regulation and lineage dynamics of adult neural stem cells

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Organisation / Research unit

Departement Biozentrum / Stem Cell Biology (Doetsch)

Department

Project start 01.03.2017

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Status Completed

Stem cells reside in specialized niches in the adult mammalian brain and generate new neurons and glia throughout life. Adult neural stem cells dynamically integrate signals from the microenvironment to remain dormant or become activated to divide and give rise to progeny. The ventricular-subventricular zone is the largest germinal niche in the adult mouse brain, and generates olfactory bulb interneurons, oligodendrocytes and astrocytes. We have recently developed strategies to purify both quiescent and activated neural stem cells and their progeny directly from their niche. We will investigate the heterogeneity and potential of adult neural stem cells and define how distinct compartments of the stem cell niche regulate their behavior. Together these will give insight into the intrinsic and extrinsic signals that regulate adult neural stem cell behavior.

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