

Hosting group information for applicants

Name of DKFZ research division/group:
Molecular Neurogenetics (A240)

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Please visit our website for further information on our research and recent publications.

RESEARCH PROFILE AND PROJECT TOPICS:

One critical question in the cancer stem cell field is to block the cancer stem cells but not harming normal stem cells during therapy. Using proteomic approach, we recently discovered a novel enzyme regulating dormant cancer stem cell in glioblastoma, and this gene is not expressed by normal neural stem cells. Surprisingly, blockage of this target leads to inhibition of essential pathways regulating tumor growth. We also generated CreERT2 knock in mice, which allow lineage tracing of dormant cancer stem cells in during therapy. The project aims to use this mouse model to identify the molecule signatures of these cells, and perform lineage tracing in different tumor models to identify dormant cancer stem cell populations in other tumors. We are also collaborating with pharmaceutical companies to develop drug inhibitors, thus this project will involve some collaborations with company for validation of compounds using our mouse models.



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