

## Research profile for applicants

Name of DKFZ research division/group:	Cell Fate Engineering and Disease Modeling (A340)
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Group homepage:  Visit this website for further information on current research and recent publications.	https://www.dkfz.de/en/cell-fate-engineering

## RESEARCH PROFILE AND PROJECT TOPICS

One of the most exciting concepts in biology is the plasticity of cell fate that allows cellular identity to be reset. Strikingly, this plasticity is essential for normal development, but several human diseases are also associated with unwanted changes in cell identity. For example dedifferentiation and adoption of stem cell-like properties are hallmarks of cancer and aberrant gene expression is linked to neuropsychiatric diseases. Investigating the mechanisms that safeguard cell identity will therefore provide new opportunities to understand and treat these devastating diseases. Our group mainly employs pluripotent stem cells and cell fate engineering to reconstruct and investigate human development and disease. Our mission is to understand the mechanisms that determine and maintain cell fate with the goal to treat diseases associated with loss of cell identity.

Interested candidates for the postdoctoral fellowship could be working on:

- Studying the molecular mechanisms of cell fate induction and maintenance using reprogramming technologies.
- Model mental disorders using stem cell-derived induced human neurons.
- Investigating the role of cell identity loss in human malignancies.

