# Research profile for applicants

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| Name of DKFZ research division/group: | ***Cell Fate Engineering and Disease Modeling (A340)*** |
| Contact person: | ***Moritz Mall, Tel: +49 6221 42-3195, E-Mail: m.mall@dkfz.de*** |
| Group homepage:<br>*Visit this website for further information on current research and recent publications.* | ***https://www.dkfz.de/en/cell-fate-engineering*** |
| Eligibility: | • ***DKFZ Postdoctoral Fellowships***<br>• ***Dr. Rurainski Fellowship at DKFZ*** |

## 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.

Investigating the mechanisms safeguarding cell identity will provide new opportunities to understand and treat these devastating diseases. Our group employs pluripotent stem cells, cell fate engineering, organoids, and mouse models to reconstruct and investigate human development and disease. Our mission is to understand the mechanisms that determine and maintain cell fate with the goal of treating diseases associated with loss of cell identity.

Interested candidates for the postdoctoral fellowship could be working on the following:

• Studying the genetic and epigenetic mechanisms of cell fate induction and maintenance using computational biology and reprogramming technologies.

• Investigating the role of cell fate plasticity and cell identity loss in human malignancies.