

Hosting group information for applicants

Name of DKFZ research division/group:

Genome instability in Tumors (B420)

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Group homepage: <https://www.dkfz.de/en/genominstabilitaet-in-tumoren/index.php>

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

RESEARCH PROFILE AND PROJECT TOPICS:

Unknown before the next-generation sequencing era, chromothripsis is a new phenomenon of genome instability, by which a presumably single catastrophic event generates extensive genomic rearrangements of one or a few chromosome(s). Importantly, chromothripsis may initiate a substantial proportion of human cancer cases - as more cancer genomes are being sequenced, more and more tumor types are identified, for which chromothripsis plays a major role. In addition, chromothripsis is linked with poor prognosis for cancer patients. Our goal is to decipher the mechanistic basis of chromothripsis, the context in which it arises and the implications for cancer patients.

Possible projects

We are looking for a highly motivated postdoctoral scientist, who would like to work on a fascinating newly discovered phenomenon. Our work goes from basic research aiming at a better understanding of the mechanisms underlying chromothripsis to pre-clinical studies in mouse models. Within this framework, there is a broad range of possible projects for the candidate, depending on individual predilections and aptitudes. Next-generation sequencing, single-cell technologies and CRISPR-Cas9 are core methods used in our group. Projects combining wet lab and computational approaches are possible.



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