

Research profile for applicants

Name of DKFZ research division/group:	Division of Translational Medical Oncology / B340
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Group homepage: <i>Visit this website for further information on current research and recent publications.</i>	https://www.dkfz.de/en/translational-medicinische-onkologie/index.php https://www.nct-heidelberg.de/en/tmo

RESEARCH PROFILE AND PROJECT TOPICS

Our division works to advance oncology care by translating molecular discoveries into personalized, biology-guided treatment. Central to this effort is MASTER, one of the most comprehensive molecular profiling programs in oncology worldwide, through which we have analyzed genomic, transcriptomic, epigenomic, and proteomic data from more than 6,600 patients with rare and difficult-to-treat cancers and integrated the results into molecular tumor board-guided treatment decisions. This effort has uncovered numerous previously unrecognized molecular alterations across tumor types, and postdoctoral scientists in our group have the opportunity to pursue these discoveries experimentally, using state-of-the-art functional genomics, proteomics, and in vivo model systems, define their mechanistic consequences, and, in select cases, feed results back into clinical decision-making. In addition, our division is moving into the field of liquid biopsy, offering further wet-lab opportunities to link laboratory findings directly to patient care.

A further focus of our division is intratumor heterogeneity as a driver of treatment resistance. We coordinate HEROES-AYA (Heterogeneity, Evolution, and Resistance in Oncogenic Fusion Gene-Expressing Sarcomas Affecting Adolescents and Young Adults), a multicenter consortium funded as a Cancer Grand Challenge within the National Decade against Cancer, which investigates how oncogenic fusion genes generate heterogeneity, clonal evolution, and resistance in sarcomas affecting adolescents and young adults, and develops strategies to counteract these processes through targeted and immune-based therapeutic approaches.



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Postdoctoral projects in our group draw directly on patient-derived data and models generated within these programs and combine hypothesis-driven laboratory research with translational and, where appropriate, clinical validation. As part of the National Center for Tumor Diseases (NCT) Heidelberg, our division offers direct access to patient samples, clinical and molecular data, and molecular tumor boards, alongside close collaboration with computational, functional genomics, and clinical groups across DKFZ and NCT. We seek highly motivated candidates with a strong background in cancer biology or a related field and a genuine interest in bridging laboratory discovery and clinical application.



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