

NATIONALES CENTRUM FÜR  
TUMORERKRANKUNGEN DRESDEN  
UNIVERSITÄTS KREBSCENTRUM UCC

getragen von:  
Deutsches Krebsforschungszentrum  
Universitätsklinikum Carl Gustav Carus Dresden  
Medizinische Fakultät Carl Gustav Carus, TU Dresden  
Helmholtz-Zentrum Dresden-Rossendorf

**dkfz.** DEUTSCHES  
KREBSFORSCHUNGSZENTRUM  
IN DER HELMHOLTZ-GEMEINSCHAFT

Forschen für ein Leben ohne Krebs

The German Cancer Research Center (DKFZ) is seeking for the partner site Dresden of the National Center for Tumor Diseases (NCT) a

## PhD Student in Bioinformatics

(Kennziffer 2022-0278)

*The DKFZ is committed to increase the proportion of women in all areas and positions in which women are underrepresented. Qualified female applicants are therefore particularly encouraged to apply.*

*Among candidates of equal aptitude and qualifications, a person with disabilities will be given preference.*

*To apply for a position please use our online application portal (<https://www.dkfz.de/de/stellenangebote/index.php>).*

*We ask for your understanding that we cannot return application documents that are sent to us by post (Deutsches Krebsforschungszentrum, Personalabteilung, Im Neuenheimer Feld 280, 69120 Heidelberg) and that we do not accept applications submitted via email. We apologize for any inconvenience this may cause.*

The German Cancer Research Center is the largest biomedical research institution in Germany. With more than 3,000 employees, we operate an extensive scientific program in the field of cancer research.

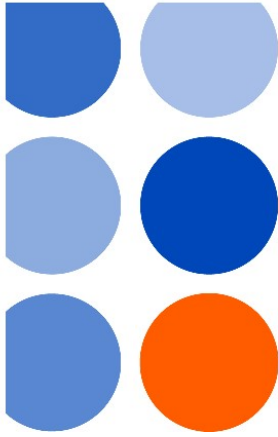
The National Center of Tumor Diseases (NCT) Dresden is a joint institution of the German Cancer Research Center, the University Hospital Carl Gustav Carus Dresden, the Faculty of Medicine at TU Dresden, and the Helmholtz-Zentrum Dresden-Rossendorf (HZDR). The NCT with sites in Heidelberg and Dresden is the leading oncological center in Germany and is being further expanded to an international center of excellence regarding point-of-care and individualized cancer medicine.

### Job description:

The department „Translational Medical Oncology“ of the German Cancer Research Center (DKFZ) at the National Center for Tumor Diseases Dresden (NCT/UCC) and the “Translational Functional Cancer Genomics” group of the DKFZ at the NCT Heidelberg, headed by Prof. Hanno Glimm, focus on the functional and molecular characterization of malignant cell regulation and metastasis formation. Therefore, biobanks of patient-derived in vivo and in vitro cancer models have been established and extensively characterized. These models are utilized to assess clonal dynamics and regulation of tumor-initiating cell (TIC) activity in gastrointestinal cancers (e.g. Cell Stem cell 2011; EMBO MolMed 2017; IJC 2017 and 2020; JEM 2017; Nature Genetics 2017, Cells 2019, Cancer Discovery 2018, Cell Rep. 2021). For specific targeting of functional tumor heterogeneity, we have evaluated the impact of novel therapeutic approaches on primary patient-derived tumor models. Global insertional mutagenesis gene activation and pooled shRNA knock down screens allowed identification of candidate genes potentially critical for proliferation, tumor and metastasis formation.

In addition, the department drives a precision oncology program for genomic analysis of patient cancers as a basis for interventional clinical trials (NCT MASTER). This program has demonstrated that whole-exome/genome and RNA sequencing in a clinical setting provides relevant diagnostic information and creates opportunities for pharmacologic intervention (Cancer Discovery 2021). Functional testing of drug sensitivity on patient own tumor cells hereby provides an additional layer of functional stratification.

The overall goal of our lab is to mechanistically understand functional intra-tumor heterogeneity and its consequences and regulation as prerequisite to develop safe and efficient therapeutic strategies. We are a part of the BMBF funded HEROES-AYA consortium (Heterogeneity, Evolution and Resistance of Fusion Gene Driven Sarcomas in Adolescents and Young Adults) which addresses the challenge of intra-tumor heterogeneity and evolution and resulting treatment resistance in sarcomas.



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Within this consortium, the successful PhD candidate will, in close collaboration with other partners, focus on a deepened understanding of genetic tumor heterogeneity on the single-cell level, assessing clonal genetic heterogeneity and developing improved deconvolution tools for bioinformatics analyses of heterogeneity from bulk sequencing. To address these challenges, we are seeking a talented and highly motivated PhD student with relevant education in bioinformatics, ideally with additional experience in the field of cancer research.

#### **Your profile:**

Applicants are expected to hold a master's degree or an equivalent in bioinformatics, or biology / life sciences with relevant experience in bioinformatics analysis. An additional background in cancer biology, cellular or molecular biology is preferred but not required. High (self-)motivation, creativity and ability to work on research projects independently and as a part of diverse collaborations are essential for this position. Applicants are expected to possess an excellent written and oral command of English.

Applications should include a CV, cover letter, certificates, expected availability date, a complete list of publications and 2-3 references.

#### **Contract period:**

The position is limited to 3 years.

#### **Important notice:**

The DKFZ is subject to the regulations of the Infection Protection Act (IfSG). As a consequence, only persons who present proof of immunity against measles as well as against COVID-19 may work at the DKFZ.

#### **Contact:**

Julia Dorok, Telefon 0351-4585527

Please note that we do not accept applications submitted via email.

#### **Application deadline:**

23.08.2022

