The German Cancer Research Center (DKFZ) is seeking for the partner site Berlin of the German Cancer Consortium (DKTK) a

PhD Student

(Ref.-No. 2018-0197)

Together with university partners at seven renowned partner sites, we have established the German Cancer Consortium (DKTK). The Translation Centre is located in the premises of the Charité Berlin.

Your tasks:

Carcinogenesis is a consequence of dynamically evolving clones that allow the cancer to adapt to external environmental changes such as therapy. High-throughput sequencing now allows us to identify these clones and trace their evolutionary trajectories during disease progression. We have acquired DNA and RNA sequencing data from colorectal cancer liver metastases before and after therapy with the aim to unravel resistance mechanisms at the genetic and transcriptome level. Investigating the evolutionary trajectories of the individual subclones will allow us to gain mechanistic insights into how resistance is acquired in these tumors.

Your task will be to analyze genetic and transcriptome sequencing data to elucidate the evolutionary mechanisms behind resistance development in our in-house colorectal cancer cohort. This includes identification of somatic changes on the level of single nucleotide variants (SNVs) and somatic copy-number alterations (SCNAs) as well as linking these variants to changes in gene regulation during disease progression. You will investigate the subclonal composition of these tumors and detect subclonal SCNAs and SNVs using methods developed in our labs. Integration and comparison of experimentally derived data in the laboratory with published datasets will be conducted.

The candidate will be located in the laboratory for Molecular Pathology and Tumor Systems Biology (Prof. Dr. Christine Sers, Institute of Pathology, Charité Universitätsmedizin, Campus Mitte). The project is of multidisciplinary nature and will require interactions with local collaborators in Berlin as well as international collaboration partners

Your profile:

We are looking for a highly-motivated candidate with existing expertise in genomics data analysis (MSc or BSc in a relevant field), and a desire and the determination to expand this expertise during their PhD. Working comfortably in a Unix environment (Bash) as well as prior experience in working with RNA-seq and DNA-seq data is required (R, Python, Bioconductor, Conda). We expect substantial knowledge in one or more biological disciplines. Prior experience in cancer research would be desirable. Our project is multidisciplinary spanning several collaborating labs.
The German Cancer Research Center is committed to increase the percentage of female scientists and encourages female applicants 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 (www.dkfz.de/jobs).

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.

We therefore expect the successful candidate to be self-motivated and able to drive and follow research projects alone and with our collaborators. Excellent written and oral command of English is essential. Applications should include a CV, cover letter and 2-3 references.

**Contract period:**
The position is limited to 3 years.

**Contact:**
Ms Julia Serr, phone +49 (0)6221/42-1655

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

**Application deadline:**
13.09.2018