

Charité - Universitätsmedizin Berlin - Institut für Pathologie



Das Institut für Pathologie der Charité - Universitätsmedizin Berlin ist eine der größten und bekanntesten Universitätspathologien in Deutschland. Wir versorgen die Kliniken der Charité und externe Einsender mit dem gesamten Spektrum der diagnostischen Pathologie inklusive aller Spezialbereiche. Außerdem vertreten wir das Fach in einer exzellenten Forschung und Lehre.

PhD in bioinformatics/ cancer genomics 3D cancer genomics lab at Charité Institute of Pathology

City: Berlin; Starting date (earliest): At the earliest possible; Duration: 3 years;
Remuneration: 65% E13 PhD contract

Working field

We are looking for a highly motivated PhD candidate in bioinformatics interested in investigating how cancer cells change the 3D genome to hijack gene regulation for aberrant expression of oncogenes from high-level genomic amplifications. The bioinformatics part of the project will involve whole genome sequencing and epigenetic analysis of several hundred tumor samples from breast and lung cancer patients. There is a parallel experimental biology part, where we will model the computationally observed recurrent oncogenic changes to the 3D genome using CRISPR-based approaches in cancer cell line models.

Your responsibilities may include, but are not limited to, the following activities:

- Analysis of sequencing data from short-read and long-read WGS, methylation, HiC, ATAC, ChIP, and RNAseq data starting from the raw data/ fastq files.
- Identify significantly recurrent genomic changes in cohorts of tumor samples, developing generalizable tools and pipelines in the process.
- Work with the other group members and collaborators in Berlin and other institutions across the world.
- Contribute to all levels of the research you are engaged in, including experimental design, data analysis, visualization, and writing.

Requirements

- MSc in Bioinformatics, Data Science, Computer Science, Biostatistics or similar.
- Experience in computational biology (sequencing and data analysis, classification tools, pipeline development in HPC environments)
- Strong intrinsic motivation, scientific curiosity, organizational skills, and interest in learning about novel technologies.
- Strong communication skills in written and spoken English.
- Being collaborative and proactive.

What we offer

The lab is a young group funded by a Max Eder Grant of the German Cancer Aid and is located at the Institute of Pathology at Charité Campus Mitte. We have extensive experience in both computational and experimental approaches. The successful applicant will work closely with an international and interdisciplinary group, including clinicians, bioinformaticians, and biologists. The environment provides many opportunities to learn new skills, and we are deeply committed to excellent mentorship. A wealth of basic science and clinical collaborations in Berlin enable the pursuit of questions with translational potential. For more information, please see <https://www.duboislab.org/> and feel free to reach out via email (frank.dubois@charite.de).

We offer a friendly, collaborative, fast-paced environment that strives for scientific excellence, investigating clinically impactful questions, and developing each team member. You will work in close collaboration with Prof. Beule's group at cubi (<https://www.cubi.bihealth.org/team/>). We also offer a chance to affiliate with the CompCancer grad school (<https://www.comp-cancer.de/>) under co-supervision of Prof. Beule.

Application

Please send your application as a PDF file, including a cover letter indicating your research interests, potential starting date, a curriculum vitae, publication list, and contact information of up to three references to frank.dubois@charite.de.

More information at <https://stellenticket.de/191308/LUH/>

Offer visible until 09/03/25

