

PhD position in Bioinformatics for blood-based cancer diagnostics

The lab of Liquid Profiling and Clinical Bioinformatics (headed by Dr. Dr. Christof Winter) is looking for a highly motivated PhD student with good programming skills to join our team. We are an enthusiastic research group developing novel blood-based cancer diagnostics. We are located at the Institute of Clinical Chemistry at *Klinikum rechts der Isar*, the university hospital of the Technical University of Munich (TUM). The position will be part of a DFG-funded research project on blood-based detection of drug resistance in prostate cancer patients.

Project description

Liquid biopsies – blood samples containing circulating tumor cells (CTCs) and cell-free nucleic acids from tumor cells – can provide information about presence and therapy resistance of a tumor in cancer patients. In blood samples collected from patients with advanced prostate cancer, we are investigating DNA and RNA from whole blood, blood plasma, platelets, and CTCs in order to early detect resistance to targeted drug therapy, and to stratify patients for more precise, individualized treatments.

Further reading:

<https://www.tum.de/en/about-tum/news/press-releases/detail/article/34157/>

<https://www.ncbi.nlm.nih.gov/pubmed/28818355>

Prerequisites

- Above-average Master or diploma degree in bioinformatics, computation biology, biostatistics, computer science, physics, chemistry, biology, or a related discipline
- Profound programming skills (preferably R)
- Experience in data science and machine learning is desired
- Experience with digital PCR data is a plus
- Experience in statistics is a plus
- Eagerness to learn and contribute to future cancer diagnostics
- Enjoying to work in a dynamic, interdisciplinary environment (medicine, biology, chemistry, computer science)
- Excellent communication skills in English, spoken and written
- Strong motivation, scientific curiosity, and commitment to scientific excellence

Environment

Our institute is located on the university hospital campus (Klinikum rechts der Isar) with an own droplet digital PCR machine and access to fluorescence imaging and Illumina high-throughput sequencing machines at the TranslaTUM. We are working in close collaboration with urology and other clinical partners.

Position

The position is on the TV-L E13 scale (65%). It is to be filled at the earliest possible date and initially for a fixed term of three years. The applicant will be part of a structured PhD programme (<http://www.mgc.med.tum.de/node/12281> or <http://www.phd.med.tum.de>). We give priority to severely disabled applicants with essentially equal qualifications. As an equal opportunity employer, TUM explicitly encourages applications from women as well as from all others who add diversity to our university's research.

How to apply

Please send your application including CV with contact details of referees, transcripts or degree certificates, and a brief statement of your research interests in one PDF file to Dr. Dr. Christof Winter – christof.winter@tum.de. Please note that we cannot reimburse expenses related to the job interview.

Contact

For further details, please contact Dr. Dr. Christof Winter, Institut für Klinische Chemie, Klinikum rechts der Isar, Technische Universität München, Ismaninger Str. 22, 81675 München – christof.winter@tum.de or +49 89 4140 4765