Universitätsmedizin Essen
Universitätsklinikum

Job Vacancy

The University Hospital Essen offers first class medical services in the Ruhr metropolis. Every year, 225.000 patients are treated in 30 clinics, 27 institutes and specialized centers. The over 8.000 employees offer medical care with state-of-the art diagnostics and therapies, which meet highest international standards. Patient care is connected with basic and translational research at an internationally competitive level.

PhD Student (m/f/d)

(pay grade: EG 13 TV-L)

Work Area: Department of Hematology and Stem Cell Transplantation
Job ID: 12175

Start Date: Next possible date
Work Scope: part-time employment / 25,025 h
Contract Type: temporary
Contract duration: 36 months from the start of the project; in accordance with § 2 (2) WissZeitVG for the duration of the project

Your tasks:

• As part of the project, the candidate will investigate the interplay between cancer cells and their tumor immune microenvironment using longitudinally collected DNA and (single nucleus) RNA sequencing data. This work will be performed in close collaboration with the Institute for Artificial Intelligence in Medicine (IKIM), which provides state-of the art computational infrastructure.
• You will contribute to:
- Computational analysis of large-scale genomic datasets
- Application and development of computational tools for mutational signature analyses
- Processing of raw sequencing data (particularly Whole Genome Sequencing and single nucleus RNA sequencing) via established computational pipelines
- Scientific publications
- Planning, perfoming and documenting of bioinformatic laboratory work
- Presentation and discussion of results at regular internal and external meetings

Your profile:

• We are seeking a highly motivated candidate with a strong background in bioinformatics and computational biology who will develop and apply computational tools to decipher ecotypes and mutational signature dynamics in the context of cancer treatment.
• Diploma or Master's degree in natural or life sciences in good standing
• Proficiency in using Linux/UNIX-based operating systems and working with HPC systems using SLURM
• Experience with R and/or Python for data analysis, visualization, and statistics
• Familiarity with workflow management tools such as Snakemake and/or Next flow
• Strong coding skills, including version control with Git and thorough script documentation

• Experience in analyzing sequencing data, including sequence alignment, quality control, variant calling/filtering, and gene expression analyses
• Familiarity with sequencing databases such as TCGA/ICGC, UCSC, and Ensemble
• Basic understanding of cell biology, molecular biology and cancer biology
• Fluent in scientific English

Look forward to:

• Our group has expertise in the computational analysis of multi-omic datasets, including *Glioma Longitudinal Analysis (GLASS) Consortium* (Kocakavuk *et al.* 2023, *Neuro Oncol;* Kocakavuk *et al.* 2021, *Nature Genetics*; Barthel *et al.*2019, *Nature*; Varn *et al.* 2022, *Cell*) and Hartwig Medical Foundation (HMF) datasets (Kocakavuk *et al.* 2021, *Nature Genetics*). The GLASS, HMF and other datasets, including ICGC-PCAWG and AACR-GENIE, will be available for analysis.
• Cutting-edge methods for longitudinal, multi-level, and single-cell sequencing in preclinical models and patient biospecimens
• The Emmy Noether Group '*Computational Pathology*', led by Emre Kocakavuk, MD, PhD of the Department of Hematology and Stem Cell Transplantation (Chair Prof. Dr. C. Reinhardt), is funded by the German Research Foundation (DFG).
• Graduate School of Biomedical Science (BIOME): Access to its structured PhD lecture and seminar program, interdisciplinary exchange within the BIOME network
• Support and supervision for academic endeavors as needed
• Comprehensive training in state-of-the-art technologies, covering both theory and methodology
• Opportunities for interdisciplinary networking and international collaborations (e.g. as part of the GLASS consortium)
• Supporting and enriching work environment with close interdisciplinary contact to dry-lab/wet-lab researchers as well as Clinician Scientists
• A secure job in the public service of the state of NRW
• Fair payment in accordance with the collective wage agreement (TV-L) incl. annual bonus payment and supplementary company pension scheme
• 30 days of vacation per calendar year (for a full-time position)
• Interdisciplinary work with colleagues from other departments
• Working with modern equipment and certified quality standards
• Family-friendly corporate culture, e.g. company daycare center, vacation program for school-age children, advice and support from the Employee Service Office in all life situations
• Wide range of training and continuing education opportunities, e.g. at the Training Academy of UK Essen
• Health Management, e.g. company integration management, vaccinations, promotion of sports activities
• Attractive fringe benefits, e.g. reduced-price canteen meals, community events, accommodation in student residences

General conditions:

- The pay grade classification depends on the personal and collective legal prerequisites.

- The University Hospital Essen is an equal opportunity employer. Female scientists are particularly encouraged to apply.
- Disabled applicants will be preferentially considered in case of equivalent qualification.
- In the case of a written application, please submit your documents only as uncertified copies and do not use folders, as these will not be returned. Data protection-compliant destruction is guaranteed.
- A certificate according to §23a Infection Protection Act (IfSG) regarding the vaccination and serostatus of measles is required.

Contact person and further information about the position:

Dr. med. Dr. rer. nat. Emre Kocakavuk
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You will find detailed information on the job advertisement and contact persons behind the button - Apply now:

https://bewerbung-karriere.ume.de/Vacancies/12175/Application/CheckLogin/1

We use your data exclusively for application purposes in accordance with the applicable data protection regulations. Further information can be found in the privacy statement on our homepage at: www.uk-essen.de.