

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 international competitive level.

PhD student (f/m/d)

(pay grade: EG 13 TV-L)

Work Area: West German Cancer Center (WTZ), Bridge Institute of Experimental Tumor Therapy, Institute of Cell Biology (Cancer Research) and Clinic for Particle Therapy

Job ID: 11709

Start Date: 01.01.2025 at the earliest, but no later than 01.04.2025

Work Scope: Part-time employment / 25,025 h

Contract Type: Temporary

Contract duration: 42 month from employment, until 30.09.2028 at the latest; in accordance with § 2 (1) WissZeitVG

Your tasks

About us

The advertised position is located at the Bridge Institute of Experimental Tumor Therapy (principle investigators: Prof. Dr. Jens Siveke, PD Dr. Johann Matschke and Prof. Dr. Beate Timmermann). The project is linked to the focus area P1 of the GRK 2762 "Effect of KRAS gene dosage and molecular subtype on radiosensitivity in PDAC".

The use of radiotherapy (RT) for treatment of pancreatic ductal adenocarcinoma (PDAC) is still controversially discussed. Herein, due to substantial technical advances the role of highly conformal RT, e.g. stereotactic RT (SBRT) and proton beam radiotherapy (PBT), in multimodal therapy of PDAC is increasing. Major challenges to successful therapy of PDAC are the lack of common targetable genetic alterations, the extensive molecular heterogeneity, and the pronounced therapeutic resistance, including RT resistance. Moreover, predictive biomarkers and therapeutic targets for therapy individualization are mostly missing. Recent studies including own preliminary work identified two molecular PDAC subtypes that differ substantially in gene expression profiles (e.g. KRAS gene dosage), metabolic and stromal phenotypes, sensitivity to chemotherapy or targeted therapies, and prognosis. However, the role of PDAC subtypes for RT resistance is still unknown. The proposed project aims to evaluate a panel of human PDAC cell lines representing the classical and QM subtype for their response to RT (photons, protons), to record

dynamic changes in transcriptional and metabolic phenotypes upon RT, and to investigate how KRAS gene dosage, pharmacologic perturbation, or environmental stress alter the capacity of the PDAC cells to dynamically adapt their transcriptional and metabolic phenotypes in support of DSB repair and survival. Computational modeling of the obtained data shall allow to reveal subtype specific biomarkers and targets for modulating radiosensitivity.

The GRK 2762 “Heterogeneity, plasticity and dynamic in cancer cell, tumor and normal tissue responses to cancer radiotherapy” offers outstanding internationally-oriented interdisciplinary scientific research and training opportunities for graduates of experimental or computational life sciences and (bio)medicine with interest in basic and translational cancer research and computational biology (<http://www.uni-due.de/med/forschung/grk2762/index.shtml>).

Your profile:

- Talented and enthusiastic candidates with high interest in the research topic of GRK 2762
- Strong Diploma/Master degree in Cell or Molecular Biology, Biochemistry, Radiation Biology, Experimental Diploma/Master degree Medicine, Computational Biology or related fields
- High motivation and commitment for active cross-disciplinary collaboration
- Abilities for problem-solving and independent work
- Work with laboratory animals may be obligatory (depending on the project)
- Fluent in spoken and written English (knowledge of German is not a requirement)

Look forward to:

- Opportunity to conduct high-level interdisciplinary research projects
- Stimulating interdisciplinary and internationally-oriented academic environment
- Innovative cross-disciplinary scientific training for PhD and MD students at the interface between radiation biology and oncology, precision medicine, and computational biology
- Training in transferable academic and soft skills
- Funding for active participation in workshops and conferences and international visits to collaboration partners
- Regular supervision and mentoring
- Excellent career opportunities
- 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

Open-Minded

- 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
- The participation in secondary employment depends on the „Hochschulnebenständigkeitsverordnung“ of North-Rhine Westphalia.
- Disabled applicants will be preferentially considered in case of equivalent qualification.
- The position is also available as part-time employment.“

Contact person and further information about the position:

You will find detailed information on the job advertisement and contact persons behind the button - Apply now:

<https://bewerbung-karriere.ume.de/Vacancies/11709/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.