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 (f/m/d)

(pay grade: EG 13 TV-L)

Work Area: Clinic for Cardiology and Angiology
Job ID: 11726

Start Date: 01.12.2024 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:

The advertised position is located at the Clinic for Cardiology and Angiology (principle investigator: Prof. Dr. Tienush Rassaf). The project is linked to the focus area 3 of the GRK 2762 “Treatment-induced lung and heart toxicity” of the GRK.

A majority of patients with advanced cancers will receive radiotherapy (RT), but the dynamic effects on the cardiovascular system remain incompletely understood. Thoracic RT for the treatment of e.g. breast and lung cancer or lymphoma comes along with an increased risk of heart failure (particularly with preserved ejection fraction), coronary artery and valvular heart disease. It should be noted that some patients appear more susceptible to RT-associated cardiac injury. The underlying reasons (e.g. predisposition, combination therapy) remain to be studied. The detrimental sequelae upon heart exposure to radiation include vascular injury followed by oedema, and dynamic activation of the inflammasome finally leading to fibrosis in the working myocardium and vasculature. A key contributor of RT-induced lung injury is an enhanced activity of CD73 leading to increased/profibrotic adenosine levels to increase activity in stromal cells. Whether this is relevant for RT-related heart injury has not been studied systematically. The applicant has recently developed a novel three-dimensional (3D), simultaneous quantitative approach to visualize heart injury components by combining bleaching-augmented solvent-based non-toxic clearing (BALANCE) with light sheet fluorescence microscopy (LSFM).1-3 Taking advantage of this approach, this projects aims to identifiy the underlying pathological CD73-dependent signaling in the heart following RT.

The GRK 2762 on “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
• 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 „Hochschulnebentätigkeitsverordnung“ 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/11726/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.