

We are one of the youngest universities in Germany and think in terms of possibilities, not limitations. In the heart of the Ruhrregion, we develop ideas of the future at our 11 faculties. We are strong in research and teaching, live diversity, support potential and are highly committed to an educational equality that has earned this name.

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.

The **University of Duisburg-Essen** offers within the
German Research Council (DFG)-funded Research Training Group GRK 2762

1 PhD position (f/m/d) – E 13 TV-L, 65%

**“Biomarkers of pneumonitis and lung fibrosis upon thoracic radio(chemo) therapy
with or without concomitant ant- PD-L1 antibody therapy”**

Starting 1 October 2022

The pay grade classification depends on the personal and collective legal requirements. The salary is in accordance with the German public service salary scale. The positions are third-party funded until September 30th, 2026.

About us

The advertised position is located at the Institute of Cell Biology (Cancer Research) and will be conducted in close cooperation with the Department of Radiotherapy (principle investigators: PD Dr. Nika Guberina and Prof. Dr. Verena Jendrossek). The project is linked to the focus area 3 of the GRK 2762 “Treatment-induced lung and heart toxicity” of the GRK.

Project description: Concurrent cisplatin-containing chemotherapy regimens and immune checkpoint inhibitor (ICI) consolidation therapy have become standard of care for locally advanced lung cancer with PD-L1 expression > 1% following definitive radiochemotherapy (RCT). Synergistic effects of combined radiotherapy (RT) and ICI therapy have been described in clinical trials. However, immune related adverse effects are dose-limiting for RT, RCT and ICI therapy and may even exert overlapping pulmonary toxicity in sensitive patients. Currently, diagnosis of adverse effects is made by exclusion based on clinical assessment, pulmonary function tests, and radiological findings, but predisposing factors and biomarkers are less defined. The project aims to examine the complex mechanism of action of ICI therapy combined with RT and/or cytotoxic chemotherapy with regard to immune-related lung tissue reactions and pulmonary radiotoxicity in patients and in a co-clinical murine model. We will record numerous baseline conditions and time-resolved functional abnormalities in the immune repertoire, and investigate their role as potential risk drivers and contributors of therapy-induced lung disease. Overall goal is to identify predisposing risk and biomarker patterns for early detection of different types of severe immune-related lung tissue injury and thereby to improve multimodal treatment.

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>)

We offer

- 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

Qualification 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 is obligatory
- Fluent in spoken and written English (knowledge of German is not a requirement)

Applications

Interested candidates should fill in the application form available at <http://www.uni-due.de/med/forschung/grk2762/index.shtml> and send it together with a curriculum vitae, a copy of all university degrees and other certificates (e.g., on English language skills, FELASA B qualification) and the indication of two referees (University professors) in **a single** pdf-file to the tender number **1231** Application GRK 2762/Project T1 to bewerbung@uk-essen.de or to Universitätsklinikum Essen, Personaldezernat, Hufelandstraße 55, 45147 Essen, Germany.

Application deadline: **01.07.2022**

Interviews will take place in Essen in July 2022, starting **14th of July 2022**.

The University Duisburg-Essen aims at promoting the diversity of its members (see <http://www.uni-due.de/diversity/international.shtml>). Applications from disabled or equivalents according to § 2 Abs. 3 SGB IX are encouraged. The participation in secondary employment depends on the “Hochschulnebenbeschäftigungsverordnung” of North-Rhine Westphalia. The University Duisburg-Essen aims at increasing the share of women in the scientific personnel and therefore explicitly encourages women to apply. Women will be preferentially considered when equally qualified according to the state equality law.

Open-Minded

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.