Universitätsmedizin Essen | IFZ Institut für Zellbiologie (Tumorforschung) | Universität Duisburg Essen Open-Minded | Gefördert vom Bundesministerium für Bildung und Forschung

Institute of Cell Biology (Cancer Research) at the University Hospital Essen, offers within the BMBF-funded collaborative project "Influence of altered metabolic pathways on the therapeutic radiation response of tumors"

a temporary PhD position (13 TV-L / 65%) starting from 01.04.2021

The PhD project is based on previous work of the supervisor on metabolic modulation of radiosensitivity (Matschke J. et al, ARS 2016; Hlouschek J. et al, Front Oncol 2018; Hlouschek J, et al, Cancer Lett 2018; Xiang et al, Radiat Oncol 2020) and is integrated into the BMBF METABOLiST research network. The focus of the collaborative project is to identify metabolic processes that influence cellular radiation response and therapy response in head and neck tumors. The aim is to identify therapeutic targets and agents to influence the radiation response by modulating metabolic processes.

Within the scope of the PhD project, a systematic characterization of metabolic adaptation responses (Seahorse Bioanalyzer) in combination with a radiobiological characterization of tumor and normal tissue cells in vitro, after exposure to ionizing radiation in combination with metabolic modulation will be performed. In addition, functional validation of identified gene/metabolite networks and metabolic bottlenecks critical for radiation response as therapeutic targets for modulation of radiosensitivity will be performed.

Your profile:

- University degree (diploma or master's degree) in biology, biochemistry, molecular medicine or an equivalent biomedical field of study.
- Good knowledge in biochemistry of metabolic pathways
- Good knowledge in common cell and molecular biological methods
- Basic knowledge in bioinformatics methods
- Grundkenntnisse in Bioinformatischen Methoden
- Knowledge in metabolite analysis is an advantage
- English spoken and written
- High motivation for biomedical research in an interdisciplinary project

We offer:

We are a dedicated international multidisciplinary team with enthusiasm for science. We offer excellent technical equipment, a versatile repertoire of methods from the fields of molecular biology, immunology and radiation biology/experimental radiation oncology, and broad support for initial training on the project, in the team and within the research network, as well as connection to a structured PhD program (BIOME Graduate School, https://www.uni-due.de/biome/). The cooperation in the case of secondary employment is governed by the University Secondary Employment Ordinance of the State of North Rhine-Westphalia. Severely disabled applicants and persons of equal status as defined by § 2, Para. 3 of the German Social Code IX (SGB IX) will be given preferential consideration in the event of equal suitability. The University of Duisburg-Essen aims to increase the proportion of women among its academic staff. Applications from women are expressly encouraged. Women will be given preferential consideration in cases of equal suitability, ability, and professional performance, unless reasons relating to the applicant outweigh these.

Please send your application documents (letter of motivation, CV, certificates, 2 references) with **reference number 1008 within 2 weeks** after publication of this advertisement to:

Dr. Johann Matschke
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or via Email: johann.matschke@uk-essen.de