

JOB VACANCY

The University Hospital Essen offers first class medical services in the Ruhr metropolis. Every year, 225.000 patients are treated in 27 clinics, 23 institutes and specialized centers. The over 6.000 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. State-of-the-art core facilities, including imaging, cell sorting and sequencing are available on site. Soft-skill development, mentoring and a structured PhD programme are available through the graduate school BIOME.

The **Research Division** (Head: Professor Sven Brandau) **of the Department of Otorhinolaryngology** is currently seeking a

PhD Candidate (m/f/d)

(pay grade: 13 TV-L / 65 % - temporary employment)

The employment is provided for the duration of a third-party funded project for a period of initially three years. The pay grade classification depends on the personal and collective legal requirements.

Oncology and Immunology are major research themes of the Medical Faculty. You will work in this area to the **research theme: Interplay of microbiome and tumor microenvironment in head and neck cancer.**

Your project:

Your project is carried out in close cooperation with international cooperation partners and clinical colleagues at the University Medical Center Essen. We will study the composition of the microbiome in patients with cancer and microbiome-immune system interactions in the tumor microenvironment. Tumor tissues will be analyzed with modern OMICS-technologies and multi-parameter image analysis tools. Complex in vitro cell culture systems will be established to model the interplay of microbes, immune cells, tumor cells and stromal cells. You will be given the chance to present your own findings at national and international conferences.

Selected publications:

Lang S, Brandau S, Marchesi JR, Jablonska J, Thurner D, Mattheis S, Buer J, Hussain T. (2020) [The microbiome in head and neck tumors-initial findings and outlook]. HNO. 68(12):905-910.

Si Y, Merz SF, Jansen P, Wang B, Bruderek K, Altenhoff P, Mattheis S, Lang S, Gunzer M, Klode J, Squire A, Brandau S. (2019) Multidimensional imaging provides evidence for down-regulation of T cell effector function by MDSC in human cancer tissue. Science Immunol. 4(40):aaw9159.

Lang S, Bruderek K, Kaspar C, Höing B, Kanaan O, Dominas N, Hussain T, Droege F, Eyth C, Hadaschik B, Brandau S. (2018) Clinical Relevance and Suppressive Capacity of Human Myeloid-Derived Suppressor Cell Subsets. Clin Cancer Res. 24(19):4834-4844.

Our group

In our group you can expect a good working atmosphere and lively research environment at the interface of basic science and clinical medicine. We offer a wide spectrum of methods ranging from molecular biology, immunology and experimental animal models to patient material and high-end imaging. The research themes of our group are: immunological tumor-host interaction with a focus on myeloid cells, tumor immunotherapy and the immunobiology of mesenchymal stromal cells (MSCs).

More information can be found here: <https://www.uni-due.de/zmb/members/sven-brandau.php>

Your profile/qualifications:

- Completed academic degree in the natural sciences or life sciences (Master or Diploma)
- Basic experience in the fields of cell biology, molecular biology or immunology
- Solid scientific English skills are required
- Pure basic research does not satisfy you
- You are looking for a clinical environment and a disease-orientated research project
- You are willing to work independently and apply your knowledge to a new area of research
- Initial experience with OMICS data sets and / or multiplexed digital image analysis (HALO, QuPath, etc) would be an advantage

A Masters degree or diploma is required for this position. Equivalence to a German Masters Certificate is required. An experimental Masters Thesis must be part of the previous education. The PhD student will be integrated into the Graduate School of Biomedical Science (BIOME) and thus benefit from its structured Ph.D. lecture and seminar program as well as from interdisciplinary exchange within the BIOME network. Doctoral degree may be obtained from the Faculty of Medicine or the Faculty of Biology. For details see: <https://www.uni-due.de/biome/>

The University Hospital Essen is an equal opportunity employer. Female scientists are particularly encouraged to apply. The participation in secondary employment depends on the „Hochschulnebenbeschäftigungsverordnung“ of North-Rhine Westphalia. Disabled applicants will be preferentially considered in case of equivalent qualification.

Please send applications (CV, two letters of recommendation or the contact details of two referees, proof/certificate of Masters Degree or Diploma, presentations/publications, summary of training/experience, spectrum of methods and an English abstract/summary of your masters/diploma thesis) with reference to the tender number **1202** within 2 weeks preferably by **email in ONE single pdf file** to: Dr. Tanja Hardt-Knechtli; E-Mail: tanja.hardt-knechtli@uk-essen.de

For questions please contact:

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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.