

## PhD student position in Spatial Proteomics (f/m/d)

### *“Deciphering breast cancer heterogeneity and tumor microenvironment with correlative MALDI imaging”*

We are looking for a highly motivated PhD student to be jointly hosted by the team of Lukas Kenner at the Division of Laboratory Animal Pathology (**University of Veterinary Medicine Vienna**) and the team of Klaus Kratochwill at the Core Facility Proteomics (**Medical University of Vienna**). The PhD project will be part of **Multimodal Imaging project “Deciphering breast cancer heterogeneity and tumor microenvironment with correlative MALDI imaging”** funded by the WWTF.

#### **The Project**

The overarching goal of this project is to decipher breast cancer heterogeneity with correlative multimodal imaging and radiomics. Current invasive tools and imaging technologies can't provide a comprehensive assessment of BC heterogeneity of the tumor in its entirety. We will, for the first time, address the challenge of the tumor microenvironment by coupling magnetic resonance imaging (MRI) and multi spectral imaging (MS) with molecular tumor profiles obtained with MALDI mass spectrometry imaging (M-MSI) and mass cytometry (CyToF). The student will perform all steps of **MS, M-MSI and CyToF multimodal imaging analysis**, from sample preparation (matrix spraying optimization) to image analysis.

#### **The Host Institutes**

The Unit for Laboratory Animal Pathology is situated at the Campus University of Veterinary medicine <https://www.vetmeduni.ac.at/en/laboratory-animals/research>. The infrastructure of the Core Facility Proteomics of the MedUni Vienna, is located at the interdisciplinary Anna Spiegel Center of Translational Research (<https://corefacilities.meduniwien.ac.at/proteomics/>). State of the art MS-imaging, MALDI-imaging and mass cytometry devices (Bruker Rapiflex, HTX Sprayer, Fluidigm CyToF) for spatial proteomics are complemented by dedicated devices for LC-MS based proteomics.

#### **The Candidate – Desired Skills and Experience**

- Master's degree in Biochemistry, Molecular Biology, Bioanalytical Sciences, Bioinformatics, or a related field.
- Experience with mass spectrometry is of advantage; willingness to learn new (omics) technologies and data science is a must.
- Standard molecular biology methods (e.g. PCR, Western blot, protein isolation) and/or background in preclinical research (e.g. experiments with cells and mice) and/or background in biostatistics/data science are an advantage.
- Very good communication skills in English (optional: German); Lab management and organization skill; high flexibility and mobility



#### **We offer**

- State-of-the-art multispectral- and mass spec infrastructure and supervision by recognized experts
- A challenging job in an inspiring, dynamic, young, multi-disciplinary and engaged research environment
- Full-time PhD position starting as soon as possible; Salary according to collective loan agreement (Kollektivvertrag der Universitäten) and university guidelines for PhD projects

Send your application directly to: [proteomics@meduniwien.ac.at](mailto:proteomics@meduniwien.ac.at)

Further information: <https://bit.ly/30xdgpm> | Applications deadline: 31.12.2021 (the position may be filled before the deadline; late applications may be accepted if the position is still open)