



We are offering:

## MSc Thesis in the core facility Flow Cytometry

at 82152 Planegg-Martinsried, Großhaderner Str. 9.

**Institution:** Core Facility Flow Cytometry –  
Biomedical Center (BMC) of the Faculty of Medicine

**Start Date:** as soon as possible

### Our Research

As the Core Facility Flow Cytometry we are delivering flow cytometry related services to all researchers on the campus and beyond.

More information: <https://www.flowcytometry.bmc.med.uni-muenchen.de/index.html>

### Project Description

Flow cytometry is an established and highly important method for the diagnosis and classification of hematological malignancies. In collaboration with the Laboratory for Leukemia diagnostics of the University Hospital Munich, we aim to develop and evaluate a **30+ color spectral flow cytometry panel for the differential diagnosis of B-cell lymphomas**.

In addition to experimental panel development, the project will investigate how **automated and computational approaches** can be used to identify malignant cell populations and characterize disease-specific immunophenotypes in highly multiparametric spectral flow cytometry data.

### Key objectives will include

- Development and optimization of a multiparametric spectral flow panel
- Characterization of healthy blood and bone marrow samples as reference controls
- Analysis of different B-cell malignancies
- Identification of malignant populations using automated clustering approaches

### Techniques You Will Learn

- Spectral flow cytometry
- High-parameter panel design and optimization
- Sample preparation of blood and bone marrow samples
- Spectral unmixing and autofluorescence handling
- High-dimensionality data analysis and visualization

**Requirements:**

- Currently enrolled in a Master's program (Molecular Biology, Biology or Developmental Biology, Biomedical Sciences, Human Genetics or a related field)
- Strong interest in immunology, hematology and flow cytometry
- Previous flow cytometry experience is beneficial
- Good communication skills in English
- Commitment to scientific accuracy and collaborative research
- Previous wet lab experience would be desired.

**Our offer:**

- Interesting Master Thesis at the interface of hematology, immunology, spectral flow cytometry and data science
- Hands-on-experience with state-of-the-art spectral flow instruments (+ training on all existing flow cytometers if desired)
- Integration into the activities of the Core Facility Flow Cytometry of the BMC
- Close supervision by a dedicated team
- Free parking spaces
- Several cafeterias and cafés on campus and student discounts

**Application:**

Please send your CV and a one-page motivation letter to:  
benjamin.tast@med.uni-muenchen.de