

*Core Facilities Imaging and Computational Bioanalytics*

## High content screening for multiparameter phenotypic profiling of cells - staining, image acquisition and statistical analysis of data

High-Content Screening (HCS) uses automated microscopy, multi-parameter image processing, and visualization tools to extract quantitative data from cell populations and, thereby, allows a detailed analysis of individual cells regarding a variety of parameters. Compared to plate readers information on individual cells can be generated. The huge amount of data, which is generated, needs proper data management and statistic analysis for correct interpretation of data.

Theory: principle of common cell-based assays (cytotoxicity, apoptosis, oxidative stress, proliferation, organelle function) and of HCS, statistical methods.

Practical part: plate layout, seeding, treatment of plates for photometric and HCS analysis, MTS and cell staining, HCS data acquisition, statistical analysis of data.

**Teaching and learning method:** 40% lecture and 60% practical work

**Languages of instruction:** English or German

**Target audience:** PhD students, technicians and researchers

**Entrance qualifications:** Experience with cell culture

**Costs:** 400 Euro (University)/ 550 Euro (Company)

**DFP:** 10-Points

**Registration:** [zmf-sekretariat@medunigraz.at](mailto:zmf-sekretariat@medunigraz.at) (deadline: 14 days in advance)

**Lecturer:** Eleonore Fröhlich, MD, Prof.

As the number of participants is limited (min. 4 and max. 8), please register early to confirm your seat! Registration is open til 14 days in advance.

**May 13<sup>th</sup> 2020 (9am to 4pm)**

**May 14<sup>th</sup> 2020 (9am to 4pm)**

**ZMF seminar room 03-012**

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