

Graduate Program in Molecular Cell Biology:

Special Lecture/Course in: Fluorescence Microscopy Techniques

Lecturer: Obermair/Flucher/Offterdinger

Number: 41503

Type: UE Semester hours: 2

Charakter: Block

Time/Date: 4.-7.6. 2019

Location: Department of Physiologie

Limited number of places YES, number of places 6, registration necessary YES

For registration or questions please contact 9003-70836; bernhard.e.flucher@i-med.ac.at and sign up in I-med Inside

Aim:

To become familiar with modern fluorescence microscopy applications and equipment used in cell biology

Description/contents:

The course will be a mixture of hands-on laboratory work, demonstrations, and lectures. The topics include: GFP- and immunofluorescence applications, double and tripple labeling, fluorescent antibodies, toxins, lipids, organelle markers, and Ca²⁺ indicators, digital image acquisition, analysis, and image processing, laser confocal microscopy, and microfluorometry.

In addition you will learn about theoretical consideration of light microscopy (like the limit of resolution) and about practical aspects (like how to handle and care for a precious microscope and what is the right microscope for your application?)

If you have a specific fluorescence microscopy application or a problem you want to be addressed in the course, please let me know. I will see what we can do.

Suggested reading:

North, A.J. 2006. Seeing is believing? A beginners' guide to practical pitfalls in image acquisition. J. Cell Biol. 172, 9-18. (mandatory reading before attending the course!)