Techniques and Approaches in Morphology

Organizers: Jean-Pierre Hornung, Jean-Yves Chatton, Michel Kielar & Christiane Devenoges  
Unil-DNF

3 ECTS

Aim
The aim of this course is to learn about the preparation of brain tissue and cell cultures for different morphological staining techniques and visualisation by fluorescence/transmission microscopy.

Program
A theoretical introduction will take place on Monday morning:
• Microscopy and imaging - Jean-Yves Chatton  
• Histological technique with emphasis on immunofluorescence - Jean-Pierre Hornung

The rest of the week will be devoted to practical demonstrations in the laboratory about microscopy on brain slices and cultures, addressing basic protocols and techniques both in histology and immunocytochemistry:
• Fixation techniques  
• Brain slicing: cryotome, cryostat, vibratome  
• Nissl, DAB immunostaining and immunofluorescence  
• Acquisition of images with transmission light and fluorescence: stereomicroscopy, large field and confocal  
• Image processing: Neurolucida, Imaris, etc.

Participants will practice one or more techniques at each step. If you wish to bring your own slices or cultures, or a particular antibody to test, please discuss this with the organizers before the course starts.

Dates
22 – 26 October 2018, all week from 9h-17h.

Location
Department of Fundamental Neuroscience (DNF). Room and lab to be confirmed. Rue du Bugnon 9, CHUV-Bugnon campus, Lausanne.

Evaluation
An evaluation of the acquired knowledge that will take place on Friday afternoon. An active participation during the course is also requested.

Registration
Please register ASAP by sending an e-mail (with course name as subject and your supervisor in copy) to lndscourses@gmail.com. The number of participants is limited to 12. Places will be given on first come – first serve basis, in parallel considering the student’s background and utility of the course for the thesis project.