

Flow Cytometry, Cell Sorting, MEFLCS1

1.5 credits

Third cycle

General information

This course is given as part of the range of courses offered at the Research School in Stem Cell Biology, but is open to other participants if places are available. The course is aimed at doctoral students, researchers and technical staff at the Faculty of Medicine who would wish to deepen their theoretical and practical knowledge of cell sorting.

The course is conducted on a full-time basis and corresponds to one week of full-time study.

Language of instruction

English

Aim

The course aims to provide practical knowledge of droplet-based cell sorting (FACS) that can be directly transferred to research questions.

Learning outcomes

On completion of the course, the participants shall be able to:

- theoretically explain how cell sorting works
- set up FACS instruments and conduct quality controls
- perform cell sorting in practice
- troubleshoot the most common problems that might occur during cell sorting
- assess risks associated with cell sorting

Course content

The course contains the following elements:

- the theory behind cell sorting
- preparation of a flow cytometer for cell sorting
- execution of cell sorting and adaptations for different types of experiments

- troubleshooting, quality control and validation of cell sorting
- execution of a risk assessment

Course design

The course consists of literature studies and group-based discussions alongside practical exercises. There may be some lectures. The course is predominantly based on practical exercises.

Assessment

In addition to the completion of practical elements, attendance at all teaching sessions and active participation in discussions and group exercises are compulsory. Assessment is based on a written assignment, which is submitted and then discussed by the group, as well as practical exercises.

Grades

Pass (G) or Fail (U)

Entry requirements

Participants must have completed the Flow Cytometry – Introductory Course (MEFLIN1) or equivalent and have practical experience of flow cytometry. Participants must be admitted to third-cycle studies at the Faculty of Medicine or equivalent. Postdoctoral fellows, technical staff and others with a justified need may be admitted, space permitting.

Literature

Information on course literature will be provided at the beginning of the course.