SK2536 Laboratory techniques in Life Sciences

V22

In this course you will get theoretical and practical introduction to cell culture and analysis. The course contains both lectures and labs that are tightly connected. The lecture series starts with basic methods for culturing cells and organoids followed by a range of techniques for analyzing cells and proteins with different degree of throughput and resolution. In the lab course you will first learn the basics of working in a cell biology lab and then be presented with a problem that can be solved by combining a range of techniques.

Content

The course contains an introduction followed by 13 lectures that are given at AlbaNova, KTH.

The course contains five different labs:

1. Cell culture (2 x 4 h)
2. Immunostaining and microscopy (4 h)
3. Flow cytometry (4 h)
4. Western blot (2 x 4 h)
5. PCR (4 h).

Lab 1 is performed at AlbaNova and the others at ScLlifeLab, Solna.

The labs are performed in groups of 2 students with one (lab 1) or two groups at a time (labs 2-5).

The course is given in English, requires presence and cannot be attended digitally.

Schedule

The schedule for lectures and labs can be found on Canvas course page.

Course literature

The course is based on lecture handouts and literature connected to each lecture and lab, which will be published on respective pages in Canvas.

Examination

Examination is based on labs and a written exam.

Examiner, lecturers and lab assistants

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