

BIO-603(SH)

Practical - Stahlberg Lab

Stahlberg Henning

Cursus	Sem.	Type
Molecular Life Sciences		Obl.

Language of teaching	English
Credits	1
Session	
Exam	Oral presentation
Workload	30h
Hours	28
Courses	6
Exercises	6
TP	16
Number of positions	3

Frequency

Every year

Remark

3-day Block course, every year in January. To register, contact EDMS

Summary

Cryo-electron microscopy structural analysis of proteins. The course aims at demonstrating the workflow from sample purification to determining the atomic structure of a soluble or membrane protein.

Content

Students will be introduced to the principles of protein purification, biophysical characterization of the state of the proteins, and structure determination by cryo-EM. The latter will involve sample preparation for negative stain EM and cryo-EM, image recording in an advanced and automated electron microscope, image processing, and 3D structure reconstruction.

Note

Open to max. 3 students. Please note that you are not allowed to inscribe in your own group!

Keywords

Structural biology, membrane protein structure, cryo-electron microscopy, image processing, 3D reconstruction

Resources**Websites**

- <https://www.epfl.ch/labs/lbem/>