BIO-622

Practical - Lingner Lab

Lingner Joachim, Redon Sophie

Cursus	Sem.	Type
Molecular Life Sciences		Obl.

Language of teaching	English
Credits	1
Session	
Exam	Oral presentation
Workload	30h
Hours	**26**
Courses	5
TP	21
Number of positions	**2**

Frequency

Every 2 years

Remark

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

Summary

Telomere biology. The students will obtain theoretical and practical insight into telomere biology and the roles of telomeres during cellular senescence and for genome stability.

Content

A general theoretical introduction will be given in the beginning of the course. In the laboratory, human cells will be used as model systems. Biochemical, molecular biological and cell biological assays will be performed. Specifically, telomerase activity will be measured in cellular extracts, the affinity of an RNA-protein interaction will be determined in band-shift assays and telomere integrity will be assessed by immunofluorescence.

Note

Note that while the course is open to all first year EPFL doctoral students, priority will be given to EDMS students, given that they are mandated to take three of EDMS practical modules. Note also that doctoral students from the Lingner laboratory cannot take this course. Access is limited to 4 students.

Keywords

Telomeres, telomerase, reverse transcriptase, cellular senescence, genome stability

Learning Prerequisites

Recommended courses

Background reading: Nandakumar, J and Cech, TR: Finding the end: recruitment of telomerase to telomeres. Nat Rev Mol Cell Biol 2013 Feb; 14(2):69-82

Resources

Websites

- http://lingner-lab.epfl.ch/