BIO-679 **Practical - Suter Lab**

Suter David

Cursus	Sem.	Type
Molecular Life Sciences		Obl.

Language of teaching	English
Credits	1
Session	
Exam	Oral
Workload	30h
Hours	**24**
Courses	6
TP	18
Number of positions	**3**

Frequency

Every year

Remark

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

Summary

Bioluminescence imaging and data analysis Splinkerette PCR (to analyze genomic insertion site of a transgene). The students will obtain theoretical and practical insight into embryonic stem cell biology and the study of gene expression fluctuations in single cells.

Content

The course will start out with a lecture and a discussion on stochastic gene expression and how it impacts cell fate choices in stem cells. The different methods to study gene expression at the single cell level will be discussed, as well as experimental strategies to link gene expression fluctuations to cell fate decisions.
In the practical part of the course the students will learn how to measure gene expression in single embryonic stem cells, to analyze the data and to determine the genomic insertion site of a reporter gene.

Note

Note that while the course is open to all first and second year EPFL doctoral students, priority will be given to 1st & 2nd-year EDMS students, given that they are mandated to take three EDMS practicals modules.
Note also that doctoral students from the Suter laboratory cannot take this course.
Access is limited to 4 students. Takes place every year in January.

Keywords

Embryonic stem cells, stochastic gene expression, cell fate choice.

Learning Prerequisites

Recommended courses

Basic molecular biology.

Assessment methods

Oral

Resources

Websites

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