

BIO-447

Stem cell biology and technology

Lütolf Matthias, Radtke Freddy, Suter David

Cursus	Sem.	Type
Bioengineering	MA3	Opt.
Life Sciences Engineering	MA1, MA3	Opt.
Sciences du vivant	MA3	Opt.

Language of teaching	English
Credits	3
Session	Winter
Semester	Fall
Exam	Written
Workload	90h
Weeks	14
Hours	3 weekly
Courses	2 weekly
Exercises	1 weekly
Number of positions	

Summary

This course introduces the fundamentals of stem cell biology, with a particular focus on the role of stem cells during development, tissue homeostasis/regeneration and disease.

Content

Embryonic stem cells, adult stem cells including hemaotopoietic, skin, intestine, neuronal and cancer stem cells. Concepts of nuclear reprogramming, cloning, and molecular basis of self-renewal. Stem cells and therapy, emerging concept in stem cell bioengineering.

Teaching methods

Lectures and exercices

Assessment methods

Written exam