

CAMB 6970: Biology of Stem Cells
 Course Director: Pantelis Rompolas

Syllabus 2023

Class meets Mondays at 3:30 PM in BRB 253.

Date		Class Type	Topic
Sept 11	First class	Organizational	
Sept 18	Concepts	Class discussion	Intro to Stem Cell Biology
Sept 25	Concepts	Class discussion	Pluripotency, Reprogramming and Directed Differentiation
Oct 2	Concepts	Class discussion	Adult Stem Cells and Regeneration
Oct 9	Methodologies	Class discussion	Tools to Study Stem Cell Biology
Oct 16	Clinical Applications	Class discussion	Regenerative Medicine and Ethical Issues
Oct 23	IRM Speaker	Danwei Huangfu, PhD	Human pluripotent stem cells (hPSCs)
Oct 30	Paper Review	Peer Review	TBD
Nov 6	Paper Review	Peer Review	TBD
Nov 13	Paper Review	Peer Review	TBD
Nov 20	Paper Review	Peer Review	TBD
Nov 27	Thanksgiving Break		
Dec 4	Grant Review	Study Section	Grants 1-4
Dec 11	IRM Speaker	Speaker - Jacob H. Hanna - MD PhD	Stem cell-derived embryoid models
Dec 18	Grant Review	Study Section	Grants 5-8

Description: The goal of this course is to introduce graduate students to the field of stem cell biology through group discussions, reviews of important contributions from the literature and grant writing projects. Topics include embryonic stem cells, epigenetics and reprogramming, tissue specific adult stem cells, tools and methodologies in stem cell research, regenerative medicine applications and bioethics of stem cell research. The future potential and challenges in stem cell and regeneration biology will be discussed. Important aspects of stem cell identification and characterization utilizing multiple model systems will also be a focus. Offered Fall Semester. Limited to 14 students.