UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

COURSE SYLLABUS

Genetic Mechanisms of Human Disease

2223-1-F0601Q092

Aims

The general objective of the course is to develop the ability to read, understand and discuss original scientific papers and seminars concerning genetics, with an emphasis on the mechanisms of gene regulation and their relevance for disease.

1.Knowledge and understanding

Understanding scientific papers and seminars

2.Applying knowledge and understanding

To be able to apply methods and concepts of advanced genetics

3.Making judgements

Critically discuss scientific papers

4.Communication skills

To be able to present and discuss the subjects addressed in papers and seminars with an appropriate language

5.Learning skills

Understanding the logic and methods of advanced genetics

Contents

The course will consist of research seminars and discussion in class of research papers concerning subjects that are part of the courses of Genetics of Development and differentiation and Human Molecular genetics.

Detailed program

The papers will address subjects that are part of the courses of Genetics of Development and differentiation and Human Molecular genetics, in particular:
-the development and differentiation of the hematopoietic, muscular, and nervous systems.
-genetic disease, with special regard to these systems, and their modelling in mice and cells (e.g. iPS cells)
-genome editing approaches to the therapy of genetic disease

Prerequisites

A good understanding of basic genetics and molecular biology is required

Teaching form

Seminars and discussion in class of scientific papers

Textbook and teaching resource

Original scientific papers

Semester

First semester

Assessment method

Oral exam. During the course, each student will prepare and present to the class a powerpoint presentation relative to a seminar and the related literature (3-4 papers and review), with the aim to identify important and problematic points, and bring them to discussion. The class will ask questions. At the end of the course, the exam will be completed by general questions on a different seminar.

Office hours

by appointment

Sustainable Development Goals