UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

COURSE SYLLABUS

Disease Gene Mutagenesis

2223-1-F0601Q116-F0601Q117M

Aims

The course will be multidisciplinary and organized in modules in order to offer an overview of genetic, molecular, biochemical, physiological and pharmacological aspects of a human disease.
The focus of the course will be the study, from different perspectives, of a genetic disease, from diagnosis to treatment.
In particular, at the end of the course the student will have acquired the following skills:

1. knowledge and understanding: complete overview with different integrated approaches of a specific human genetic disease
2. applied knowledge and understanding: apply what has been learned to the study of numerous human genetic diseases
3. self-judgment: capacity to critically evaluate what has been learned
4. oral competences: oral communication of what has been learned using the correct scientific terminology
5. ability to learn: critical learning and understanding of scientific literature on different aspects of a human disease.
   In the academic year 2022-2023 the genetic disease studied will be Cystic Fibrosis

For the Molecular Biology module (1 CFU), the student will learn how design expression construct of specific pathogenic mutations

Contents

Site-specific mutagenesis approches and in silico design of expression constructs

Detailed program

The Molecular Biology module is organized as follows:

- discussion of mutagenesis approaches
- design of mutagenic strategy

Prerequisites

basic Moleculr Biology knowledge

Teaching form

Lectures, group assignments, students presentations

Textbook and teaching resource

Powerpoint presentations will be available on e-learning.

Semester

second semester

Assessment method

Written exam.
The exam of the Molecular Biology module is part of the general exam of the course that will assess the learning of the material discussed in all the modules

Office hours

Upon appointment

Sustainable Development Goals