



UNIVERSITÀ  
DEGLI STUDI DI MILANO-BICOCCA

## SYLLABUS DEL CORSO

### From Bench To Bedside:translational Approach To Diseases

2223-2-F0901D050

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#### Aims

The aim of the Course is to provide the student with a critical knowledge of the technical instruments and strategies normally employed in defining the pathophysiology of the various disorders and possible new therapeutic approaches.

#### Contents

The aim of this course is to present several examples of diseases and their physiopathology, and the role of biotechnology in their diagnosis/ therapeutic approach. Gastroenterological and iron metabolism disorders will be analyzed. A general introduction on the methodologies employed to analyse the molecular mechanisms underlying the pathological processes will be provided.

#### Detailed program

Monogenic and multifactorial diseases: genetic studies and technical approaches

Physiology and pathophysiology of biliary secretion

Hepatic regeneration and liver fibrosis

Genetic diseases of the biliary epithelium

Primary hepatic tumors

Liver immunopathology

Autoimmune liver diseases

Celiac disease

Inflammatory bowel diseases

Stem cells and their niche in the intestine

Colon cancer, sporadic and inherited forms

Personalized medicine in gastroenterology

Iron homeostasis (mechanisms of cellular and systemic regulation)

Iron and hypoxia

Iron and inflammatory diseases

Hereditary disorders of iron metabolism

Iron and damage

Neurodegenerative brain iron accumulation syndromes (NBIA)

Iron and metabolic syndrome

## **Prerequisites**

Advanced knowledge in genetics, biology and molecular biology.

## **Teaching form**

For the most part the course will provide lectures respecting social distancing. Lectures will also be recorded and posted on the elearning UNIMIB website. Some lectures will only be available in the recorded version.

## **Textbook and teaching resource**

Reviews

## **Semester**

First semester

### **Assessment method**

These subjects will be evaluated within the exam of the integrated course, that will be an oral examination on the subjects taught during the lectures or on further subjects (part of the program) not exhaustively discussed in class. The exam will be in person.

### **Office hours**

By appointment

### **Sustainable Development Goals**

GOOD HEALTH AND WELL-BEING | QUALITY EDUCATION

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