UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

COURSE SYLLABUS

Alterations of Iron Metabolism

2223-2-F0901D050-F0901D096M

Aims

The aims of the Course is to provide the student with a critical knowledge of the regulatory mechanisms of iron metabolism and related disorders (iron deficiency, primary and secondary iron overload, local and systemic), and technical instruments and strategies normally employed in studying the pathophysiology of iron metabolism and related disorders, and possible new therapeutic approaches.

Contents

Presentation of several emblematic examples of diseases of iron metabolism and their physiopathology, and the role of biotechnology in their diagnosis/ therapeutic approach. A general introduction on the methodologies employed to analyse the molecular mechanisms underlying the pathological processes will be provided.

Detailed program

Iron homeostasis (mechanisms of cellular and systemic regulation)
Iron homeostasis (iron and erythropoiesis)
Hereditary disorders of iron metabolism: the hemochromatosis model
Other hereditary disorders of iron metabolism (iron deficiency anemia and anemia with iron overload)
Iron and damage
Ferritin and ferritinopathy
Neurodegenerative brain iron accumulation syndromes (NBIA): aceruloplasminemia

Prerequisites

Advanced knowledge in genetics, biology and molecular biology.

Teaching form

Lessons in presence

Textbook and teaching resource

Papers and Reviews from international literature

Semester

primo semestre

Assessment method

The exam will be oral and will focus on the topics discussed in the course plus any insights (scientific reviews) suggested by the teachers. The exam will be conducted in presence.

Office hours

by appointment

Sustainable Development Goals

GOOD HEALTH AND WELL-BEING