UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

COURSE SYLLABUS

Cancer Metabolism: Metabolic Dysregulation and Experimental Approaches

2627-121R-016

Aims

This course introduces the concepts of metabolic dysregulation, vulnerability, and flexibility in cancer compared to healthy cells. Students will explore how genetic mutations, tissue context, and nutrient availability shape tumor metabolism and therapy resistance. Theoretical lectures will cover molecular bases of metabolic alterations, role of mitochondria metabolism in cell death, and metabolic rewiring in cancer. Practical sessions will include metabolic profiling of cultured cells using advanced techniques such as Seahorse analysis, CyTOF, SCENITH, providing hands-on experience in assessing cellular metabolic function.

Contents

Detailed program

Prerequisites

Teaching form

Lectures

Textbook and teaching resource

Course materials provided by the instructor

Semester

Assessment method

Office hours

Sustainable Development Goals

GOOD HEALTH AND WELL-BEING