



UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

COURSE SYLLABUS

Patologia Generale e Immunologia

1718-3-H4101D038

Aims

Immunology: General properties of the Immune System, Cells, Tissues, and Organs of the Immune System. Natural and Acquired Immunity. The Complement. The Antibodies and Antibodies response. Major Histocompatibility Complexes I and II, Antigen presentation. Regulation of the Immuno-Response. Tolerance. Immunity and Infection, Immunity and Tumours. Immediate Hypersensitivity Reaction (Type I), Delayed-type Hypersensitivity. Immunology of Organ Transplantation. Autoimmunity. Pathology: Aetiology, Pathogenesis, Causes of the Disease. Genetic Diseases. Molecular Pathology, Pathology of the Cell Structures, Acute

and Chronic Inflammation. Wound Healing. Burns. Arteriosclerosis.

Physiopathology of Thermoregulation. Aging. Alteration of the Cell

Homeostasis. Tumours. Cancerogenesis. Genomic instability, Heredity

and Tumours. Tumours and Hormones, Paraneoplastic Syndromes.

Tumours Epidemiology

Contents

To provide tools necessary for comprehension of biological mechanisms of defence and pathological mechanisms of immune system, for comprehension of etiopathogenesis of human diseases. To acquire notions useful to face functional problems

Detailed program

AGING

Definition, features of aging, primary and secondary aging. Mechanisms of aging in cells and tissues. Morphological and functional modifications of organs. Theories of aging process.

Pathology of cellular growth - General Oncology

- Precancerous lesions, metaplasia, leukoplakia, dysplasia. Tumor. Benign malignant tumor. Invasivity, metastasis. Histogenetic classification, TNM, Grading, Stadiation. Cancerogenesis. Chemical cancerogenesis and chemical cancerogens. Physical cancerogenesis, radiations. Cancerogenesis biological agents. DNA RNA oncogenic virus. Multistep cancerogenesis. Initiation Promotion. Tumor progression. Theories of cancerogenesis. Hereditary tumors. Natural history of tumors. Molecular events. Oncogenes, oncosuppressors and their role in cellular transformation. Alteration of proliferation and differentiation in tumors. Genomic instability. Hormones and tumors, paraneoplastic syndromes. Epidemiology. Tumor and environment risk and work-related risk. Iatrogenic, dietary, luxury risk. Tumor and immunity. Immunosurveillance. Tumor antigens. Immunotherapy.

Prerequisites

knowledges concerning the previous preparatory courses

Teaching form

lessons, exercises

Textbook and teaching resource

Patologia generale e fisiopatologia: "Le basi patologiche delle Malattie"

Robbins e Cotran VII ed. Elsevier; "Patologia Generale" Pontieri, Russo,

Frati. III ed aggiornata Piccin "Cellule, tessuti e malattia- Principi di

Patologia Generale" Majno e Joris, II ed. CEA Immunologia e

immunopatologia: Roitt, Immunologia, Zanichelli, Abbas, Immunologia

cellulare e molecolare, Piccin, Kuby, Immunologia, UTET

Semester

First semester of the third year (October - December)

Assessment method

Multiple Choice Test and oral examination

Office hours

By appointment
