



UNIVERSITÀ  
DEGLI STUDI DI MILANO-BICOCCA

## SYLLABUS DEL CORSO

### Introduzione Agli Agenti Diagnostici in Vivo

2122-2-I0303D034-I0303D083M

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#### Aims

- The aim of the course is to provide students with the basic principles of general pharmacology and the mechanism of action of some of the major drugs
- Student should also learn the basic regulatory and pharmacological aspects of drugs used in diagnostic, describe the different classes of drugs used in Radiology or Nuclear Medicine; learn the fundamental properties of pharmacokinetic, pharmacodynamics, safety and efficacy of drugs used in diagnostic and in particular of CT radiological contrast media

#### Contents

Basic principles of pharmacology and regulatory requirements of diagnostic medicinal products in general with a more detailed description of iodinated contrast agents

#### Detailed program

*Introduction* to diagnostic medicinal products, regulatory requirements, general descriptions of radiological contrast media and radiopharmaceuticals.

*Pharmacokinetics* and chemical properties of iodinated contrast agents: chemical structure, physico-chemical

properties, classification on the basis of osmolarity, distribution, clearance

*Pharmacodynamics*: X rays attenuation and effects on images

*Adverse reaction*: description of adverse reaction of iodinated contrast agent, severity, frequency, risk mitigation and guide line

*Interaction with other drugs*: interaction of iodinated contrast agents with interleukine-2, metformin and beta blockers.

## **Prerequisites**

Biomedical Sciences

## **Teaching form**

Lectures, exercises

## **Textbook and teaching resource**

Slide presented during the course

## **Semester**

Second semester

## **Assessment method**

Oral exam. The oral test will focus on main issues presented and discussed with students during the course

For the evaluation of the written and oral test, the following criteria will be taken into account:

- correct answers
- answer relevance and completeness to the questions

## **Office hours**

By appointment required by mail

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