UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

COURSE SYLLABUS

Pharmacology

2223-4-H4102D024-H4102D081M

Aims

This course will provide basic knowledge about the effects of different drugs on heart and circulation and will explain the mechanisms of action of the main classes of cardiovascular drugs. The course will allow students understand how to tailor drug prescription according to patient disease and characteristics. After completion of this course, the students will learn basic knowledge about the treatment of major cardiovascular and respiratory conditions (hypertension, ischemic heart disease, heart failure, asthma etc).

Contents

Main classes of cardiovascular and respiratory drugs with their mechanisms of action, drug interactions and precautions

Detailed program

· General overview of pharmacologic therapy for cardiovascular diseases

· Anti-ischemic and antianginal therapies

· Anti-hypertensive therapies (Beta-blocking agents, Calcium channel blockers, Inhibitors of Renin-Angiotensin-Aldosterone System, Diuretics)

· Antithrombotic agents (acute and chronic anticoagulation, fibrinolytics) - brief overview, as already discussed in the Onco-Hematological diseases

· Antiplatelet agents - brief overview, as already discussed in the Onco-Hematological diseases

· Lipid-modifying therapies (statins, fibrates, ezetimibe) - brief overview, as already discussed in the Onco-Hematological diseases

· Anti-arrhythmic drugs

· Treatment of acute and chronic heart failure

- Natural products in cardiovascular medicine

· Contributory risk and management of comorbidities in chronic heart failure

· Non-cardiac drugs affecting the heart

· Treatment of asthma and chronic obstructive pulmonary disease

Prerequisites

- Fundamental knowledge on cell biology
- English language

Teaching form

- Lessons in attendance, subject to any ministerial changes following the COVID pandemic situation
- All course activities will be held in English language

Textbook and teaching resource

- Kaski JC, Kjeldsen KP. The ESC Handbook on Cardiovascular Pharmacotherapy (2 edn). Oxford University Press 2019
- Brunton L, Hilal-Dandan R, Knollmann BC. Goodman and Gilman's the Pharmacological Basis of Therapeutics (13th Edition) McGraw Hill 2018
- Opie LH, Gersh B. Drugs for the Heart - 8 edition. Saunders 2012

Semester

- First semester

Assessment method

- Written exam in English, comprising 30 multiple-choice questions with only one correct answer (among 5) aimed at evaluating global comprehension of course program. Each correct answer is scored 1.

Office hours

By email appointment at: antonio.torsello@unimib.it

Sustainable Development Goals