
COURSE: Pharmacology and Toxicology

ACADEMIC YEAR: 2016-2017

TYPE OF EDUCATIONAL ACTIVITY: Characterizing

TEACHER: Dr. Vincenzo Brancaleone

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website:

phone:

mobile (optional): **342 56 96 912**

Language: **Italian**

ECTS: **7 (lessons)**n. of hours: **56 (lessons)**Campus: **Potenza**
Dept.: **Science**
Program: **BIOTECNOLOGY IN
MEDICAL, VETERINARY AND
PHARMACEUTICAL
DIAGNOSTICS (LM-9)**Semester: **II**
(Expected Start
06/03/2017;
Expected end: no later
than 30/06/2017)

EDUCATIONAL GOALS AND EXPECTED LEARNING OUTCOMES

The course aims to provide specific knowledge and expertise about fundamental principles of pharmacotherapy and use of biological drugs, also considering the toxicology of drugs during treatments. In addition, key messages about experimental pharmacology will be conveyed.

PRE-REQUIREMENTS

Knowledge of fundamentals about Anatomy, Physiology, Biochemistry and General Pharmacology is required.

SYLLABUS**ANTIBIOTICS (20 hours)**

General principle in chemotherapy of infections. Nomenclature, spectrum, mechanism of action, therapeutic indications, side effects and adverse indications of antimicrobial drugs: Beta-lactam, Aminoglycosides, Quinolone, Macrolides, Lincosamide, Tetracycline, Chloramphenicol, Sulphonamide

OTHER DRUGS (10 hours)

Antituberculosis, Antimycotic, Antiviral.

CANCEROGENESIS AND ANTINEOPLASTIC CHEMOTHERAPY (15 hours)

Cancer pathology principles. Tumorigenesis: transformation, progression and development. Cancerogenesis assays in vitro and in vivo. Anticancer drugs: alkylating agents, antimetabolites, hormones and hormonal Modulators, antimetastasis, cytotoxic agents, antimicrotubular drugs, TK inhibitors, monoclonal antibodies, immunosuppressor agents.

GENERAL TOXICOLOGY (9 hours)

Aims of toxicology. Differences between diverse toxic agents. Main mechanisms by xenobiotics in cellular and organs toxicity. Adverse reactions in drug use. Interaction between drugs. Toxicity evaluation: experimental studies in animal models; lethality, acute subacute and chronic toxicity; toxicological assays in animal and human models

PRINCIPLES OF EXPERIMENTAL AND CLINICAL PHARMACOLOGY (2 hours)

TEACHING METHODS

The class consists of 56 hours of lessons.

EVALUATION METHODS

Evaluation will be assessed through oral examination. However, students who will attend the course will have the chance to pass the exam undergoing two intermediate tests. These will consist of multiple choice questions on restricted part of the program, followed by oral examination for the rest of the subjects.

TEXTBOOKS AND ON-LINE EDUCATIONAL MATERIAL

Goodman & Gilman,; *Le basi farmacologiche della terapia*, XI Ed. McGRAW, HILL

Katzung, *Farmacologia generale e clinica*, Ed. PICCIN
Paoletti, Nicosia, Clementi, Fumagalli, *Tossicologia generale e molecolare*, UTET
Lullmann, Mohr, Hein, Bieger, *Farmacologia per immagini*, Centro Scientifico Editore
Mannaioni, *Tossicologia medica*, UTET
Rang, Dale, Ritter, *Farmacologia*, Ed. AMBROSIANA

INTERACTION WITH STUDENTS

All info about the course and exam will be provided at the beginning of the course. Then, a list of attending students will be prepared. Professor will be officially available on Wednesday, from 2.00pm to 3.00pm at his room. However, student can contact professor anytime by email (vincenzo.brancaleone@unibas.it) or by phone (**342 56 96 912**).

EXAMINATION SESSIONS (FORECAST)¹

22/02/17
06/06/17
27/06/17
11/07/17
25/07/17
26/09/17
14/11/17

¹Subject to possible changes: check the web site of the Teacher or the Department/School for updates

SEMINARS BY EXTERNAL EXPERTS YES NO

FURTHER INFORMATION
