



# UNIVERSITÀ DEGLI STUDI DI PALERMO

<b>DEPARTMENT</b>	Scienze e Tecnologie Biologiche, Chimiche e Farmaceutiche		
<b>ACADEMIC YEAR</b>	2016/2017		
<b>MASTER'S DEGREE (MSC)</b>	MOLECULAR AND HEALTH BIOLOGY		
<b>SUBJECT</b>	PHARMACOLOGY		
<b>TYPE OF EDUCATIONAL ACTIVITY</b>	B		
<b>AMBIT</b>	50505-Discipline del settore biomedico		
<b>CODE</b>	03137		
<b>SCIENTIFIC SECTOR(S)</b>	BIO/14		
<b>HEAD PROFESSOR(S)</b>	POMA PAOLA	Professore Associato	Univ. di PALERMO
<b>OTHER PROFESSOR(S)</b>			
<b>CREDITS</b>	6		
<b>INDIVIDUAL STUDY (Hrs)</b>	102		
<b>COURSE ACTIVITY (Hrs)</b>	48		
<b>PROPAEDEUTICAL SUBJECTS</b>			
<b>MUTUALIZATION</b>			
<b>YEAR</b>	1		
<b>TERM (SEMESTER)</b>	2° semester		
<b>ATTENDANCE</b>	Mandatory		
<b>EVALUATION</b>	Out of 30		
<b>TEACHER OFFICE HOURS</b>	<b>POMA PAOLA</b> Wednesday 10:00 - 12:00 Studio Pt 35, Dip. STEBICEF, viale delle Scienze, Ed. 16, piano terra		

**DOCENTE:** Prof.ssa PAOLA POMA

<b>PREREQUISITES</b>	The student must have knowledge about biology, physiology and general chemistry
<b>LEARNING OUTCOMES</b>	Knowledge and understanding of molecular mechanisms of different drugs classes and knowledge and understanding of molecular mechanisms of toxic substances. Knowledge of action mechanisms of principal drugs and their pharmacokinetic; ability to apply methodologies to study interactions drug-receptor. Ability to apply knowledge about therapeutic and toxic features of natural drugs and of environmental toxics. Independent judgement Ability to evaluate bibliography on adverse reaction of drugs and toxics. Oral ability Ability to explain results of scientific studies also to non-expert audience. To be able to understand studies about drugs mechanisms, potential problem to use of drugs and xenobiotics and possible precautions. To be able to communicate in oral form and in write form. Learning ability Autonomy to study and to refer to scientific publications, to be able to take part to specific master, courses, seminars. To be able to collect, organize and explain data.
<b>ASSESSMENT METHODS</b>	The student must answer to three questions about general pharmacology, special pharmacology and toxicology. The student must shown knowledge and understanding of subjects and explain with specific language to obtain passing grade. More so the knowledge is detailed, more the rating is positive. Evaluation is out of 30.
<b>EDUCATIONAL OBJECTIVES</b>	The aim of this course is to provide the students with knowledge about fundamental concepts of the main pharmacological classes, the basic concepts of pharmacokinetics and pharmacodynamics of principal herbal drugs, features and mechanisms of toxic substances, adverse drug reactions; to provide the students notions about principal targets of toxic substances, their effects on tissues and organs, and to acquire methods to evaluate toxicological risk and possible preventative measure.
<b>TEACHING METHODS</b>	Teaching activity is organized in frontal lessons (48 h)
<b>SUGGESTED BIBLIOGRAPHY</b>	H.P. Rang, M.M. Dale, J. M. Ritter, R.- Flower. Farmacologia. F. Clementi, G. Fumagalli. Farmacologia generale e molecolare. Casarett & Doull. Elementi di tossicologia. Goodman & Gilman - Le Basi Farmacologiche della Terapia.

## SYLLABUS

Hrs	Frontal teaching
1	pharmacology, aim of course. definition of drug
8	pharmacokinetic: drugs administration, absorption distribution metabolism and elimination. variability of drug response
4	Receptors, dose-response curve, drug-receptor interaction, receptor binding study, potency and efficacy, agonist and antagonist.
2	pharmacogenetics
2	drug development and pharmacovigilance
2	anti-inflammatory drugs
2	antimicrobial drugs
2	anticancer drugs
2	cardiovascular system drugs
2	digestive system drugs
3	biotech drugs
4	some drugs classes acting on nervous system
6	brief focus on special pharmacology
2	toxicology: toxic substance, toxicological risk and safety index ((NOEL, ADI, TLV, MAC) and toxicodynamics
2	toxicokinetics
4	mutagenesis, cancerogenesis and teratogenesis