

## SUBJECT TEACHING GUIDE

### G1371 - Fundamental Pharmacology

#### Degree in Medicine

Academic year 2023-2024

1. IDENTIFYING DATA			
Degree	Degree in Medicine	Type and Year	Compulsory. Year 3
Faculty	Faculty of Medicine		
Discipline	Subject Area: Pharmacology and Nutrition Diagnostic and Therapeutic Procedures		
Course unit title and code	G1371 - Fundamental Pharmacology		
Number of ECTS credits allocated	6	Term	Semester based (2)
Web			
Language of instruction	English	Mode of delivery	Face-to-face

Department	DPTO. FISILOGIA Y FARMACOLOGIA
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**3.1 LEARNING OUTCOMES**

- Knowing and understanding a drug is a molecule that interacts on biological targets of major organ systems to induce beneficial effects in the treatment of diseases .
- Integrating, into the general medical knowledge, how a drug may exhibit a dual profile since it may produce therapeutic but also toxic effects.
- Being able to understand and remember the main information about the most important drugs that are used in the treatment of diseases, their mechanisms of action, as well as their therapeutic and toxicological effects .
- Knowing and understanding the role of drugs a key strategy in the treatment of human diseases.

**4. OBJECTIVES**

- To know and understand how the drugs are exerting their effects in the body.
- To know the different factors influencing the movement of the drug through the body and how they reach target tissues to induce biological actions.
- To know the main mechanisms and pharmacological actions of drugs acting on major organ systems.
- To know the mechanisms and manifestations of adverse drugs reactions on major organ systems.
- To know the principles of drug interaction.

6. COURSE ORGANIZATION	
CONTENTS	
1	General Pharmacology Introduction to pharmacology: general concepts and its importance in clinical practice. The mechanisms of action of drugs Pharmacodynamics: drug-receptor interaction and its consequences Pharmacokinetic: absorption, distribution, metabolism and elimination of drugs. Adverse effects and interactions.
2	Pharmacology of the Autonomic Nervous System Cholinergic drugs: agonists and antagonists Adrenergic drugs: agonists and antagonists Neuromuscular Blocking Agents Local anaesthetics
3	Pharmacology of chemical mediators: histamine, serotonin, eicosanoids. Non-steroidal anti-inflammatory drugs (NSAIDs)
4	Chemotherapy $\beta$ -lactams Aminoglycosides and glycopeptides antibiotics Macrolides Tetracyclines. Lincosamines. Other antibiotics. Quinolones Antifungal drugs Antiviral drugs Antineoplastic drugs Immunosuppressants
5	Pharmacology of the Central Nervous System Opioid Agonists and Antagonists Antidepressants Anti-Parkinson drugs Anticonvulsivants Neuroleptics Anxiolytic drugs General anesthesia: inhalation and intravenous anesthetics
6	Gastrointestinal and Respiratory Pharmacology: Drugs affecting gastric secretion Drugs affecting gastro-intestinal motility Drugs used to treat asthma Antitussives, mucolytics and expectorants
7	Cardiovascular and Homeostasis Pharmacology Drugs affecting blood Diuretics Inotropic drugs Anti-Arrhythmic Drugs Calcium blockers Antianginal and vasodilators drugs Antihyperlipidemic drug

8	Endocrine and Metabolism Pharmacology: Insuline and Oral hypoglycemic drugs Drugs affecting thyroid function. Drugs affecting bone metabolism. Hypothalamic and Pituitary hormones Gonadal hormones Contraceptives
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### 7. ASSESSMENT METHODS AND CRITERIA

Description	Type	Final Eval.	Reassessn	%
40% of final grade Duration Less than 30 minutes each exam Date of the exams: Along the course and according to the lab practices schedule. Conditions recovery: The continuous evaluation is not recoverable. Seven questionnaires (that may include test-,	Written exam	No	No	40,00
30% of final grade mark Duration less than 3 hours Date of the exam: see the exams calendar of Facultad de Medicina Conditions of recovery: Retake exam on the date of the ordinary call for the final exam. This partial exam (30% of the final grade mark)	Written exam	No	Yes	30,00
60% final grade (30% partial evaluation+ 30% second part exam).Calif. minimum 5.00 Duration: less than 4 hours Date of the exam: see the exams calendar of Facultad de Medicina Conditions of recovery: In an exam of similar characteristics in the extrao	Written exam	Yes	Yes	30,00
<b>TOTAL</b>				100,00
<b>Observations</b>				
If the face-to-face assessment is not allowed, the exams will be carried out "online" using the platforms authorized by the Vice-Rector's Office for Academic Planning and Teaching (Moodle, Skype for Business, Zoom, Socrative, etc.). In the event that the exam includes development questions, an oral evaluation of these may be carried out.				
<b>Observations for part-time students</b>				
The form of evaluation of part-time students will be the same as that of the rest				

**8. BIBLIOGRAPHY AND TEACHING MATERIALS**

## BASIC

Goodman & Gilman's. Las Bases Farmacológicas de la Terapéutica, Brunton, L., MCGRAW HILL, 13ª Edición, 2018

Farmacología Humana. Flórez, J, Armijo, JA, Mediavilla A (dirs.), 6 ed. Barcelona: Elsevier, 2014.

Rang y Dale. Farmacología. Ritter, Flower, Henderson, Loke, MacEwan & Rang, 9ª Ed, Elsevier, 2020

Farmacología Básica y Clínica, Pedro Lorenzo Fernández / Alfonso Moreno González / Juan Carlos Leza Cerro / Ignacio Lizasoain Hernández / María Ángeles Moro Sánchez / Antonio Portolés Pérez (eds). 19 ed. Madrid: Editorial Médica Panamericana, 2018.