27240 - Biological Activity of Chemical Compounds

Información del Plan Docente

Academic Year	2016/17
Academic center	100 - Facultad de Ciencias
Degree	452 - Degree in Chemistry
ECTS	5.0
Course	4
Period	Second semester
Subject Type	Optional
Module	---

1.Basic info

1.1.Recommendations to take this course

1.2.Activities and key dates for the course

2.Initiation

2.1.Learning outcomes that define the subject

2.2.Introduction

3.Context and competences

3.1.Goals

3.2.Context and meaning of the subject in the degree

3.3.Competences

3.4.Importance of learning outcomes

4.Evaluation

5.Activities and resources

5.1.General methodological presentation

5.2.Learning activities

5.3.Program

Transport and biotransformations

Transport of xenobiotics across biological membranes: Types and biochemical mechanisms. Enzymes as drug targets.

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DNA as drug target. Other targets.

Biotransformation of xenobiotics. Activation and inactivation. Phase I and Phase II transformations. Response and adaptation of xenobiotics.

Toxicity of chemical contaminants

Molecular mechanisms of toxicity. Cell effects of xenobiotics. Cell damage. Mutagenesis. Ames test and SOS chromotest in the evaluation of mutagenic potential.

Mechanism of action of drugs

General aspects of pharmacological drugs. Antimicrobials. Antitumoral drugs. Drugs acting on the nervous system. Other drugs.

Drug development

Pharmacological targets. Preclinical phase. Clinical essays.

5.4.Planning and scheduling

5.5.Bibliography and recomended resources

BB	Curtis Klaassen and John B. Watkins III. Casarett and Doull's Essentials of Toxicology . 2nd McGraw-Hill Professional. 2010.
BB	Farmacología / H.P. Rang ... [et al.] . - 7ª ed. Ámsterdam ; Barcelona ; Madrid [etc.] : Elsevier, D.L. 2012
BB	Patrick, Graham L.. An introduction to medicinal chemistry / Graham L. Patrick . 5th ed. Oxford : Oxford University Press, cop. 2013
BC	Josephy, P.D. Molecular Pharmacology . Oxford University Press. 2006.

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