Research Methods in Pre-clinical Pharmacology

Code: 42361
ECTS Credits: 9

<table>
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<tr>
<th>Degree</th>
<th>Type</th>
<th>Year</th>
<th>Semester</th>
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<td>4311309 Pharmacology</td>
<td>OT</td>
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</tbody>
</table>

Contact

Name: Jordi Alberola Domingo
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Teachers

Albert Badía Sancho
Victoria Clos Guillén
Raimon Guitart Bas
Ana Puigdemont Rodríguez
Pedro José Otaegui Goya
Gianluigi Caltabiano
Miguel Angel Vicente Martínez
Francesc Jiménez Altayo

External teachers

A. Casadesús
A. Esteve
A. Flores
A. Guzmán
A. Norniella
A. Pujol
B. Pérez
E. Piqué
J. Alfons
J. De la Puente
J. Hernández
J. L. Montero
J. Ramis
J. Zapatero
L. Canut

Use of Languages

Principal working language: spanish (spa)
Prerequisites

There are no special prerequisites.

Objectives and Contextualisation

To apply basic pharmacological and methodological knowledge to develop preclinical drug research and interpret the results.

Competences

- Design and conduct research on drugs.
- Generate innovative ideas.
- Interpret one’s own and other results of research on drugs.

Learning Outcomes

1. Apply models to describe and predict the time course of drug concentrations and their pharmacological response.
2. Generate innovative ideas.
3. Interpret models to describe and predict the time course of drug concentrations and their pharmacological response.
4. Plan, design, use and interpret studies (not on humans) with the aim of evaluating the effects of drugs and their mechanism of action.
5. Plan, design, use and interpret studies (not on humans) with the aim of evaluating the time course of drug concentration in biological tissues and its relation to the effects observed.
6. Plan, design, use and interpret studies (not on humans) with the aim of evaluating toxicity and possible adverse reactions.
7. Recognise and apply the ethical and quality requirements for conducting non-clinical research with drugs.

Content


**Methodology**

The final grade is the arithmetic mean of the grades obtained in the subjects that compose it.

**Activities**

<table>
<thead>
<tr>
<th>Title</th>
<th>Hours</th>
<th>ECTS</th>
<th>Learning Outcomes</th>
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<tr>
<td><strong>Type: Directed</strong></td>
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<tr>
<td>Classroom practices (PAUL)</td>
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<td>0.44</td>
<td>1, 2, 3, 5, 4, 6, 7</td>
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<td>Clinical case seminars (SCC)</td>
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<td>Practical Experimental Laboratory (PLAB)</td>
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<td>Review of papers</td>
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<td>Study, written works ...</td>
<td>127</td>
<td>5.08</td>
<td>1, 2, 3, 5, 4, 6, 7</td>
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**Assessment**

The final grade is the arithmetic mean of the grades obtained in the subjects that compose it.

**Assessment Activities**

<table>
<thead>
<tr>
<th>Title</th>
<th>Weighting</th>
<th>Hours</th>
<th>ECTS</th>
<th>Learning Outcomes</th>
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<td>Attendance and participation</td>
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<td>0</td>
<td>1, 2, 3, 5, 4, 6, 7</td>
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<td>Oral presentations</td>
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<td>Short questions exam</td>
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<td>0.04</td>
<td>1, 2, 3, 5, 4, 6, 7</td>
</tr>
</tbody>
</table>

**Bibliography**
Updated bibliography will be provided for each subject.

General bibliography:

- Guía de desarrollos preclínicos. Genoma España. 10 aniversario (2002-2012)
http://www.agenciasinc.es/Noticias/Genoma-Espana-publica-una-guia-de-desarrollos-preclinicos
- Gary C. Rosenfeld, David S. Loose, Pharmacology, 4th Ed. Lippincott Williams & Wilkins
- Fernández, Velazquez Farmacología básica y clínica, 2008, 18ª Ed.