

Corso di Laurea Magistrale in
Pharmaceutical Biotechnologies
A.A. 2024 – 2025

PROGRAMMA Teaching Staff ERASMUS+

Short Course 2024 – 2025

BIOLOGY AND CHARACTERIZATION OF RECEPTORS TARGETED BY DRUGS IN CLINICAL USE

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The main topic of the lectures and workshop will be surface receptors, especially G protein-coupled receptors (GPCRs)
The subjects covered will be the following:

Lecture 1 (Mon, April 28, 2025, 14:30-16:30) – AULA 3, DSF

After a short general introduction into the course and an overview about receptors, this lecture will focus on signalling and function of G protein-coupled receptors. Furthermore we will give insights into general aspects of pharmacokinetics, dynamics and especially pharmacogenetics, e.g. genetic polymorphisms and their relevance for drug development.

Lecture 2 (Tue, April 29, 2025, 14:30-16:30) – AULA 3, DSF

This lecture will give an overview about different methods applied for ligand-receptor interactions and the strategies for assay development. Some assays will be introduced in more detail to give an idea about the processes involved and problems which can occur will be discussed as well.

Workshop (Wed, April 30, 2025, 14:00-17:30) - AULA Informatica DSF

The workshop will be a hands-on course that on the one hand deals with database search strategies (NCBI, UniProt, cell and vector databases), molecular biology tools and programs (e.g. sequence analysis and topology predictions as well as alignment tools for sequence comparison). Furthermore, the students will learn how they can efficiently use the computer for molecular biological problems. After being introduced to each online tool and program they will apply the tools and work on some exercises. In addition, the students will be introduced to plotting and analyzing pharmacological data, which they will practice with sample data sets.

Venue: DSF - Dipartimento di Scienze del Farmaco, via Marzolo 5, 35131 Padova

Attendance: in presence

Enrolment (deadline: April 18, 2025)

https://docs.google.com/forms/d/e/1FAIpQLSfUQT6jyFxNsEH96D7tLrtOuG4Xp_WcYRNIOvC0nnIP3VtKow/viewform?usp=header

Final test: multiple choice test

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