PHD IN PHARMACEUTICAL AND BIOLOGICAL SCIENCES

Main Language of Instruction:
French ☑ English ○ Arabic ○

Campus Where the Program Is Offered: CSM

OBJECTIVES

This PhD program aims to develop specialized and innovative research while deepening knowledge in the fields of pharmaceutical and biological sciences, including the following specialties: Pharmacology, Toxicology, Biochemistry and Molecular Genetics, and Microbiology. It equips candidates with skills in bibliographic analysis, research design and methodology, experimentation and critical analysis of results, scientific communication and publication, as well as research supervision.

ADMISSION REQUIREMENTS

Candidates must hold a Master in Pharmaceutical and Biological Sciences or a master's degree in the specialty related to the PhD program, with a background that demonstrates their research aptitude.

PROGRAM REQUIREMENTS

The PhD program consists of research-based training, focusing on research and innovation. It awards the academic degree of doctor upon completion of a program totaling 180 ECTS credits, primarily through research work leading to a PhD thesis and publications. Additionally, it includes doctoral training that aids in thesis project management and enhances employability, offering skills in areas such as foreign languages, project management, and intellectual property.

The PhD in Pharmaceutical and Biological Sciences includes four specialties based on research themes and associated publications, and the research laboratory where doctoral work is conducted.

Specialties:
- Pathogens and Antimicrobials
- Clinical Biochemistry, Molecular Genetics, and Therapeutic Targets
- Pharmacology, Clinical Pharmacy, and Drug Quality Control
- Clinical and Experimental Toxicology

1. Pathogens and Antimicrobials

Focuses on advanced research in microbiology, covering topics like host-microorganism interactions, bacterial virulence, identification techniques, human bacterial ecosystems, microbiota, anti-infective therapeutics, and resistance mechanisms to antibacterials.

2. Clinical Biochemistry, Molecular Genetics, and Therapeutic Targets

Involves specialized research in clinical biochemistry and molecular biology, addressing metabolic, nutritional, and chronic diseases (e.g., obesity, lipid metabolism disorders, genetic diseases) and innovative therapeutic research from gene studies to drug development.

3. Pharmacology, Clinical Pharmacy, and Drug Quality Control

Emphasizes specialized research in fundamental and clinical pharmacology, including neuropharmacology, therapeutic monitoring, receptor signaling, pharmacogenetics, and drug quality control.

4. Clinical and Experimental Toxicology

Engages in specialized research in general and specific toxicology, covering areas like clinical toxicology, food safety, immunotoxicology, substance abuse, carcinogenesis, regulatory toxicology, and the toxicity of immunotherapies.