

University of Southern California
SCHOOL OF PHARMACY

Master of Science in Pharmaceutical Sciences and
Master of Science in Molecular Pharmacology
and Toxicology

Program Learning Objectives

The purpose of the USC School of Pharmacy **Masters program in Pharmaceutical Sciences** and **Masters program in Molecular Pharmacology and Toxicology** is to prepare students with foundational coursework in pharmaceutical sciences, pharmacology, and related sciences, and to facilitate their performance of original, high-level basic or applied research in the discipline specific to the graduate's area of emphasis, such as drug discovery, drug design, drug delivery, drug targeting, or pharmacology, utilizing approaches encompassing the expertise in the School of Pharmacy in medicinal chemistry, computational chemistry, pharmaceuticals, pharmacokinetics, pharmacodynamics, immunology, molecular biology, biochemistry, and cell biology. Graduates are recruited to top Ph.D. programs in pharmaceutical sciences, pharmacology, and related disciplines or employed in the pharmaceutical or biotech industry, or government (e.g., FDA).

Masters students enrolled in the program will be able to:

- Demonstrate an awareness of the interdisciplinary nature of research in contemporary pharmaceutical sciences and pharmacology and the ability to work across disciplines.
- Demonstrate an understanding of core scientific concepts utilized in basic and applied research in pharmaceutical sciences and pharmacology.
- Demonstrate methodological skills and an understanding of contemporary research in their respective area of emphasis, and be able to apply innovative research concepts and practices to their research under guidance of their faculty advisor.
- Demonstrate the ability to synthesize, integrate, and evaluate data from diverse sources into their research.
- Demonstrate an understanding of the statistical methods required to conduct research.
- Complete a research-based thesis in their respective area of emphasis under the guidance of their faculty advisor, which may form part or all of a publishable original research paper.