The **Pharmaceutical Sciences PhD Program** at the University of Wisconsin-Madison School of Pharmacy provides a rigorous background in scientific disciplines that are critical to the preparation of the next generation of pharmaceutical scientists. With over 30 faculty trainers and approximately 60 graduate students, the program's interdisciplinary training combines pharmaceutically relevant aspects of classical disciplines such as chemistry, biology and engineering. Students earn a PhD in Pharmaceutical Sciences, concentrating in one of three research cores: Drug Discovery, Drug Action, or Drug Delivery.

Recent program graduates have found employment in a variety of industrial settings or in prestigious postdoctoral academic research labs. Opportunities in research and development roles for pharmaceutical, biotechnology, chemical, contract research, healthcare and other innovation-minded companies are common post-graduate paths. Some graduates achieve faculty positions at colleges or at larger research institutions. By partnering with the Graduate School’s Office of Professional Development and other units on campus, we have increased student and career services such that Pharmaceutical Sciences graduate students can sharpen their professional and communication skills and reach a larger network of potential employers. The program graduated 46 PhDs from 2012-17; over ninety percent of recent alumni were working in their field within six months of graduation.

Research in **Drug Discovery** focuses on areas related to medicinal chemistry, such as small molecule development, natural products isolation and characterization, organic synthesis, chemical biology and rational drug design.

**Drug Action** focuses on areas related to pharmacology, toxicology, cellular differentiation, development, and disease. Interests include the impact of drugs and toxins on biological systems, mechanisms of normal biology, and mechanisms of disease. These are studied at the cellular, genetic, molecular, and biochemical levels using diverse model systems.

**Drug Delivery** emphasizes principles in physical chemistry and drug transport, aiming for advances in formulation, drug targeting, and multi-modal therapy. Delivery research includes the solid state chemistry of drugs, nanopharmacy, biocompatibility, molecular recognition, computational chemistry, pharmacokinetics, and molecular imaging.

The UW-Madison Pharmaceutical Sciences Division has been recognized for its research productivity, extramural funding support, publication record and teaching. The Pharmaceutical Sciences Division is housed in Rennebohm Hall, a seven-story, state-of-the-art facility and home to the School of Pharmacy.

Accepted graduate applicants commonly have strong scientific backgrounds, a passion for research, and significant laboratory experience. Students with undergraduate degrees in the physical or biological sciences, engineering, pharmacy and related fields are encouraged to apply. UW-Madison is one of the nation’s most prolific research universities, located on the shores of Lake Mendota in the state’s vibrant capital city.

UW-Madison remains extremely competitive in the national research landscape, ranking sixth in research spending among U.S. universities with high emphasis on the life sciences and basic research. The beautiful, thriving city of Madison is consistently recognized as one of the best cities in multiple categories for quality of life. Visit [grad.wisc.edu](http://grad.wisc.edu) to learn more about the many reasons to choose UW-Madison for graduate study.

**Contact**

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Intercellular communication: uncovering mechanisms that coordinate the development of multicellular organisms.
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