

Program Overview

The Integrative Pharmacological Sciences Training Program (IPSTP) is designed to support 2nd and 3rd year Ph.D. Students pursuing dissertation research projects in the pharmacological sciences. Trainees and training faculty are drawn from 7 Ph.D. programs which include Biochemistry & Molecular Biology, Chemistry, Chemical Engineering & Material Sciences, Microbiology & Molecular Genetics, Neuroscience, Pharmacology & Toxicology, and Physiology. With an emphasis placed on student training in the integrative actions of drugs, trainees choose a research mentor from among 36 training faculty.

The IPSTP program is designed to provide added value to the traditional PhD programs in the participating departments. It brings together students from diverse scientific backgrounds and creates a cohesive cohort of students interested in drug development and *in vivo* research. IPSTP activities are specific to this cohort, allowing students to build a peer network for collaboration and support.

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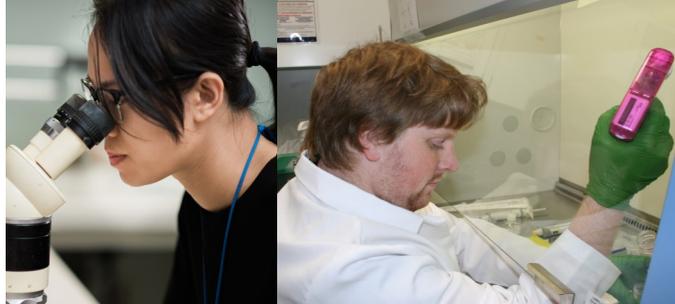
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MICHIGAN STATE UNIVERSITY

I.P.S.T.P.

Integrative Pharmacological Sciences Training Program

Department Affiliations

Biochemistry & Molecular Biology

Chemistry

Chemical Engineering

Microbiology and Molecular Genetics

Pharmacology and Toxicology

Physiology

Neuroscience

T32 Supported by:



National Institutes
of Health

Workshops and More

- Communications and Professional Development Workshop
- Annual IPSTP Boot camps focusing on drug discovery; computational pharmacology; and in vivo pharmacology
- Annual Retreat
- Student led journal club
- Fellowship preparation workshop and mock study section
- Field trips to introduce students to nonacademic career opportunities

▶ DIVERSITY

The IPSTP is committed to recruiting and providing appropriate support to underrepresented minorities, and persons with physical, sensory, and invisible disabilities.

Application Process

Students can apply for the IPSTP program at the end of their first and second years of their PhD after they have selected an eligible mentor.

The application process will include an interview with the IPSTP Executive Committee and a short scientific presentation.

Required Coursework

- Principles of Drug-Tissue Interactions
- Cellular, Molecular, and Integrated Systems Pharmacology
- Experimental Design and Data Analysis
- One Professional development courses

▶ DRUG DISCOVERY BOOTCAMP

The drug discovery bootcamp introduces students to all aspects of the drug development process. Students spend much of the week in the Department of Pharmacology and Toxicology Drug Discovery Core where they learn how to use high throughput screening to identify potential therapeutic targets. The students also meet with our medicinal chemist to learn about compound synthesis and modification.

▶ IN VIVO BOOTCAMP

This week long experience introduces students to the basics of preclinical pharmacology research. Students learn to handle small laboratory animals and are exposed to several cutting edge in vivo techniques used to test therapeutic targets for multiple human diseases. Students also learn about the regulatory requirements for small animal research studies, and they have the opportunity to visit the vet school and the MSU farms where larger animals are used in research studies.

▶ FINANCIAL AID AND BENEFITS

IPSTP students receive stipend and tuition support for two years. Students are expected to continue to participate in program activities in the years following their funded years.

IPSTP students are eligible for travel funding to attend scientific conferences. They also receive a small grants for training related expenses.

All IPSTP mentors undergo mentor training. This ensures our students have the best research experience possible.

ABOUT MICHIGAN STATE

Michigan State University is one of the top research institutions in the country and has a population of over 50,000 diverse students.

Located in East Lansing, MI, it offers affordable living with a small city atmosphere. Residents enjoy campus events and athletics, restaurants, museums, art festivals, and more.

MSU's campus is in close proximity to other major Michigan cities. It is only 3 miles east of Lansing, the state capitol. Detroit, Ann Arbor, and Grand Rapids can be reached in 1 and ½ hours or less.

Michigan also offers access to the Great Lakes, national and state parks.