



**M** | PHARMACY

# Turn Drug Discoveries into Medicine for the Body

Pharmaceutical Sciences PhD

# What Can a Pharmaceutical Sciences PhD Do for Me?

In the lab, in boardrooms and classrooms, our graduates are making an impact on health outcomes everywhere! A PhD from U-M can open doors to a number of areas, including:



Pharmaceutical and  
Biotech Companies



Federal Agencies



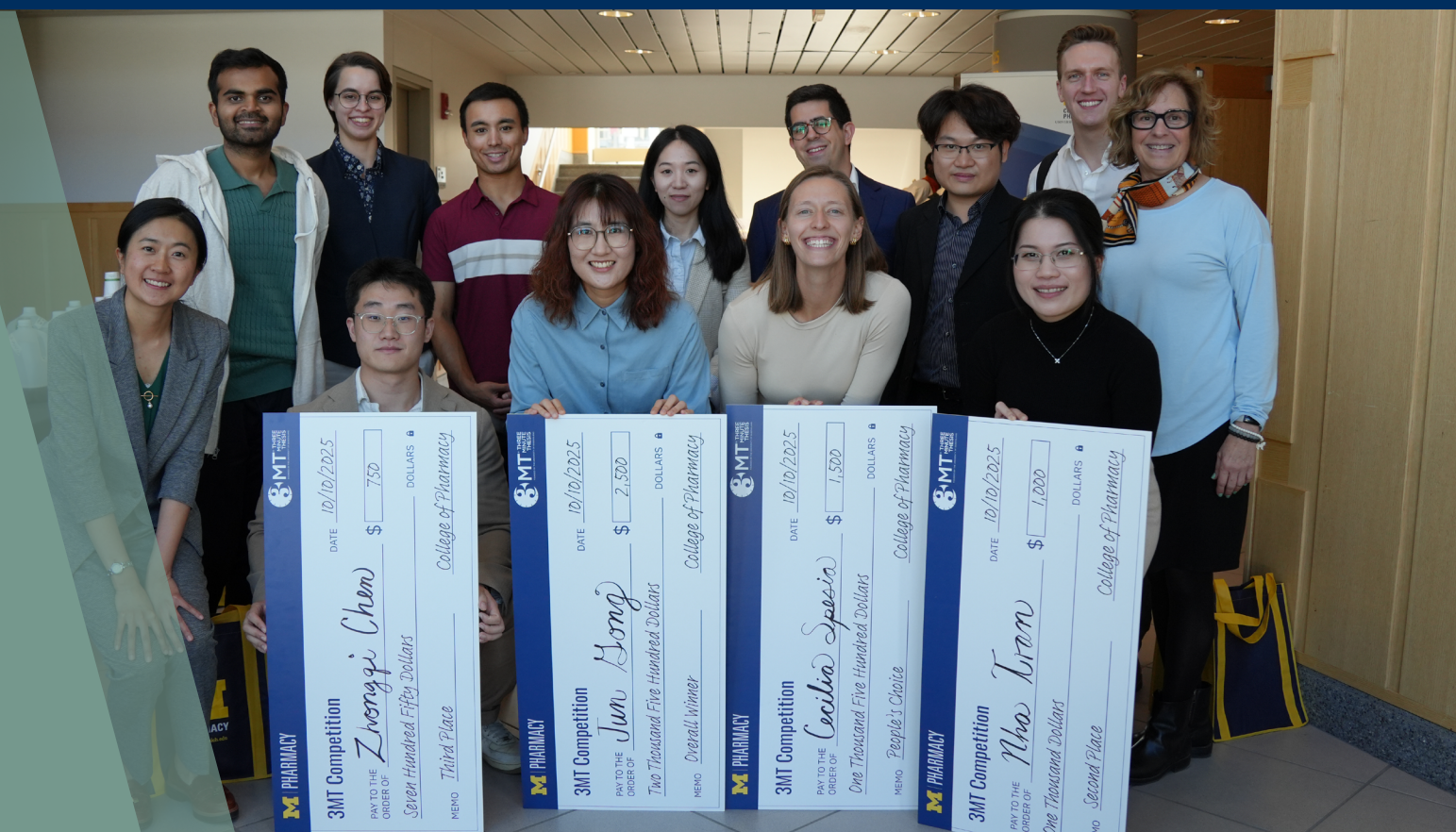
Healthcare  
Companies



Entrepreneurship



Academia





## Drug Development and Delivery **Require Inventiveness and Out- of-the-Box Thinkers Unafraid to Research at the Edge.**

“When I first interviewed for PhD programs, the PharmSci program at U-M Pharmacy stood out to me not only because of its cutting-edge research but also because of its welcoming and collaborative environment. As a student, I’ve experienced firsthand how the college fosters inclusion and support for people from all backgrounds. This strong sense of community, combined with the exciting research opportunities, reaffirmed that this was the right place for me to grow as a scientist.”

*Mariana Romero-Gonzalez, PhD Candidate*

# Why #GoBlue?

We're making a positive impact on human health, and you can too.

**#1**

in Research Funding  
in the BIG 10 Conference

**#5**

in Research  
Funding Nationally

**\$39.5M**

in Research Funding  
in 2025

**5.3**

Years to Defense

**100%**

Funded: Tuition,  
Benefits and a Stipend

**99%**

of Graduates Were  
Published at Least Once

**66%**

of Our Graduates  
Pursued a Career in  
Industry

**65**

Publications Published  
in FY25

# Ingenuity in Drug Development and Delivery Starts Here!

**Discover how science becomes medicine.** Our interdisciplinary program unites chemistry, biology, engineering and materials science to train the next generation of innovators in drug design and delivery. Students work alongside world-class faculty to develop smarter therapeutics—from nanoparticle and nucleic acid delivery systems to targeted and controlled-release formulations that improve patient outcomes. With hands-on experience using modern tools like nanotechnology, computational modeling and high-throughput screening — you'll learn how to optimize drug transport (e.g., reach the right place in the body), stability and performance (e.g., slow drug release).

## A PhD designed for you to specialize:



**Quantitative Relationships Between Chemical and Physical Behaviors of Drugs and Their Chemical Structures**



**Nanotechnology and Materials-Drug Biointerfaces**



**Chemical and Physical Integrity of Drugs and Dosage Forms**



**Delivery of Biologics and Immunologic Approaches**



**Antibody Engineering and Antibody-Drug Conjugates**



**Pulmonary Delivery**



**Mechanisms of How Drugs Cross Membranes and Barriers; and Controlled Release of Drugs**



**Regulatory Science**



**Pharmacokinetics and Pharmacodynamics of Drugs**



**Nucleic Acid Delivery and Therapeutics**



# Curriculum at a Glance

- 1**
- Core Coursework and Electives
  - Research Rotations
  - Pre-Candidacy Research Exam
  - Selection of PhD Advisor
  - Pharmaceutical Sciences Seminars

- 3**
- PhD Research
  - Pharmaceutical Sciences Seminars

*1st  
year*

*2nd  
year*

## Pharmaceutical Sciences Curriculum

*3rd  
year*

*4th  
year*

- 2**
- PhD Research
  - Electives
  - Pharmaceutical Sciences Seminars

- 4**
- PhD Research
  - Dissertation and Defense
  - Pharmaceutical Sciences Seminars
  - Graduation

## From Student to Scholar: Advance to Candidacy

- Advancing to candidacy is a major milestone in your doctoral journey. It means you have finished your coursework, passed exams and will solely focus on your dissertation research.

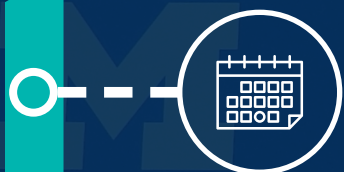
## Supporting You to a Successful Dissertation Defense.

- You will have a dissertation committee that will support and guide you.
- A defense includes a seminar presentation and is voted for degree conferment.

# Admissions Timeline



**Mid-September**  
Rackham Application Opens



**December 1**  
Application Closes



**January - February**  
Candidate Interviews



**February - March**  
Decision Emails Sent



**April 15<sup>th</sup>**  
National Decision  
Deadline for  
Prospective Students



**August**  
Orientation &  
Classes Begin

**Need help  
standing out in  
your application?**

Scan the  
QR code  
for tips and  
tricks for a  
successful  
application:





## Learn From Bold, Inventive Thinkers **Pushing the Boundaries of Pharmaceutical Science.**

Our faculty are internationally recognized innovators who explore the frontiers of drug design and delivery. Work alongside researchers and learn how to develop novel treatments to fight human diseases. Learn how medicines interact with the body and how to design new materials—both synthetic and natural—that help drugs work better.

Together, we study how to optimize a medicine's design,

dose, delivery and target to make treatments safer, more effective and transformative for patients.

Scan the QR code to meet our faculty:



# Experience Ann Arbor...

...and you'll have incredible stories to tell.



Enjoy a vibrant community offering:

- 400+ Dining Options
- Walkable Downtown & Campus
- 162 Parks & Seven Metro Parks
- 12 Museums, Music & Arts Venues
- Huron River Tubing & Canoeing

...and only 45 minutes from Detroit with even more arts, sports, and culture.

## Experience the Difference of the Maize and Blue Student Culture

Here are some must-knows for new Wolverines:

- “Go Blue!” is a greeting, farewell and rallying cry!
- The city and campus are intertwined – giving you easy access to an energetic downtown community.
- With one of the largest alumni networks, no matter where you travel, you'll likely run into someone donning the Block M.
- A leading research University and a College of Pharmacy that has an expansive research enterprise.





# M | PHARMACY

## Get to Know Us Better!

For a closer look at the Pharmaceutical Sciences PhD program and life as a Wolverine, check out our website and follow us on social media!



/UniversityOfMichigan  
/umichpharmacy  
/umichgradschool



@Umich  
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@umichgradschool



/university-of-michigan  
/umichpharmacy  
/university-of-michigan---rackham-graduate-school

You will apply for our PhD program through Rackham, who oversees the requirements, procedures, admissions and grants the PhD degree.