

Research Opportunities

for
Pharmacy Students
in
The College of Pharmacy

College of Pharmacy Mission

- Teaching
- Research: all aspects of the discovery, development, and use of medicines
- Service

What is *Research*?

- Discovery of knowledge in Pharmacy
 - New Drugs
 - New drug combinations
 - New ways to deliver drugs to their site of action
 - New ways to manage patient drug therapy
 - Cost / Benefit analysis of a particular drug therapy

Importance of Research to the Profession

- Keeps the profession alive
- Helps the profession to grow
- Confers prestige and honor
- Maintains the standing of the profession among the other health professions

College of Pharmacy Research Enterprise

- People:
 - 45 faculty
 - 100 graduate students
 - 35 postdoctoral students
 - 40 professional & undergrad students
 - 10 technicians
- Lab Space: 48,000 sq. ft.
- Funding: \$8.1 million for 2007-08

Research Programs: the "divisions"

- Medicinal Chemistry and Pharmacognosy
- Pharmaceutics
- Pharmacology
- Pharmacy Practice and Administration

Medicinal Chemistry and Pharmacognosy

- Discovery and development of new drugs

Pharmacology

- Biochemical and physiological mechanisms by which drugs exert their biological effects

Pharmaceutics

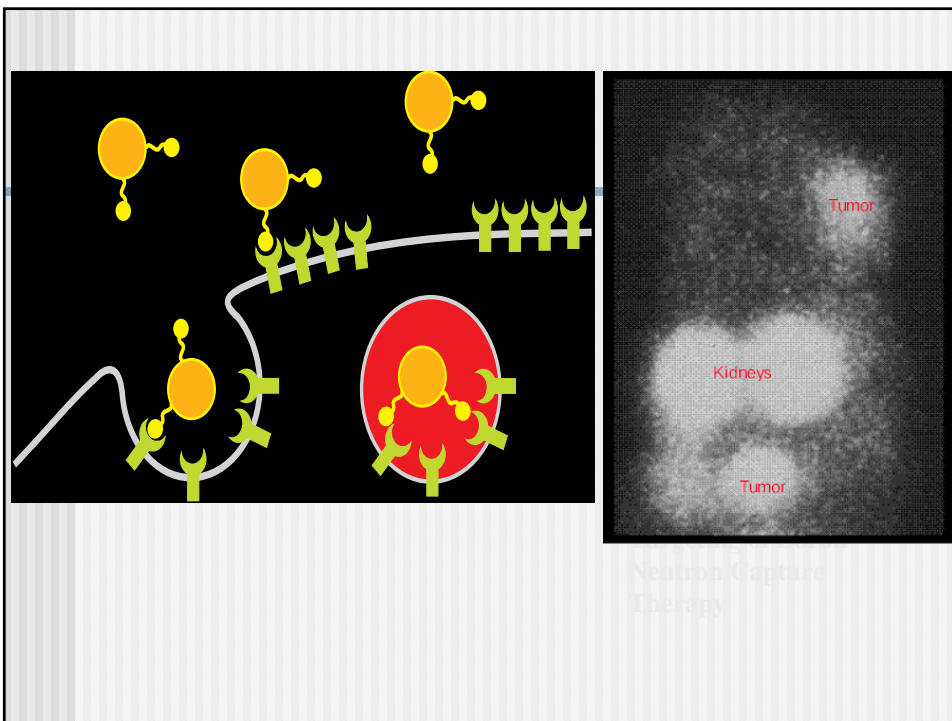
- Optimize exposure of body to drug
 - Drug concentration – time profiles
 - Drug effect – time profiles
 - Drug delivery and targeting systems
 - Bioavailability
 - Drug dosing – getting the dose right

Pharmacy Practice and Administration

- Define optimum drug dosage regimens
- Characterize people's attitudes and behaviors relative to use of medicines
- Economic issues related to use of drugs

Viewed by Therapeutic Benefit

- Drugs used to treat cancer
- Drugs that affect the brain
- Drugs used to treat heart and vascular diseases
- Optimizing of the use of medicines
- Drug delivery and targeting to specific organs or cell types



Combined Programs

- Pharm.D. / M.S.
 - M.S. in one of four Pharmacy specializations
 - M.P.H, M.B.A
- Pharm.D. / Ph.D.
- Combined program availability and degree requirements vary among divisions
 - Pharm.D. courses can be used toward M.S. and Ph.D. degrees, saving time toward completion.

NIH Loan Repayment Program

- <http://www.lrp.nih.gov/>
- In exchange for commitment to research career (two years or three years)
- Repays 25% of student loans per year up to \$35,000 per year.

How to get involved

1. Find out what is going on

College of Pharmacy Web Site:

<http://www.pharmacy.ohio-state.edu/>

Research → Undergraduate Research → Topical Index

2. Contact faculty doing research that interests you

3. Start your own project

Contact Information

Name	Program	http://www.pharmacy.ohio-state.edu/
Dr. William Hayton	All	614-292-1288 Hayton.1@osu.edu
Kathy Brooks	All	614-292-6822 Brooks.13@osu.edu
Dr. William Hayton	Pharmaceutics	614-292-1288 Hayton.1@osu.edu
Dr. Tom Li	Medicinal Chem. / Pharmacognosy	614-688-0253 Li.27@osu.edu
Dr. Lane Wallace	Pharmacology	614-292-9917 Wallace.8@osu.edu
Dr. Cynthia Carnes	Pharmaceutical Administration	614-292-1715 Carnes.4@osu.edu