UNIVERSITY OF GEORGIA
College of Pharmacy

University of Georgia
Pharmaceutical and Biomedical Sciences

Gurvinder Singh Rekhi, Ph.D.

Director, B.S. Program in Pharmaceutical Sciences

gsrekhi@uga.edu

Program

I. Welcome

II. How do you choose a major?

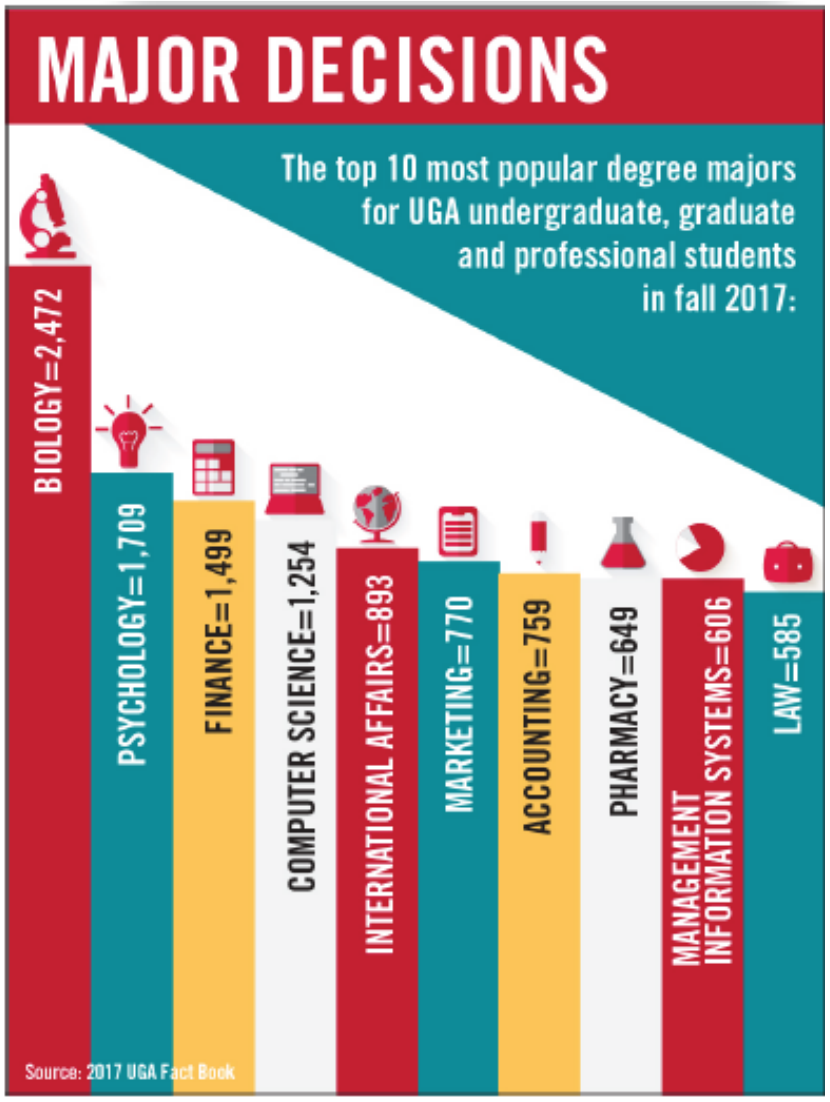
III. BS Pharm Sci Course Curriculum

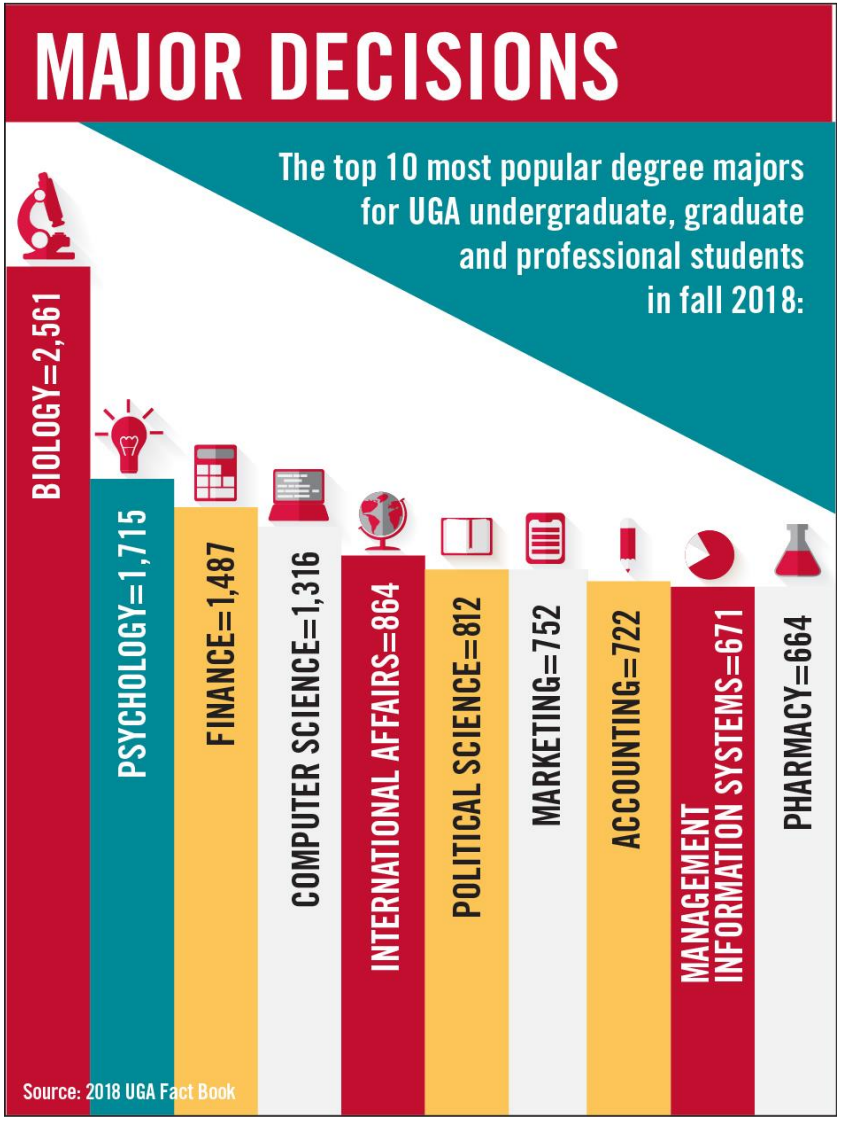
IV. Faculty introductions

V. Questions

VI. Reception

Popular Majors at UGA





ExploreHealthCareers.org

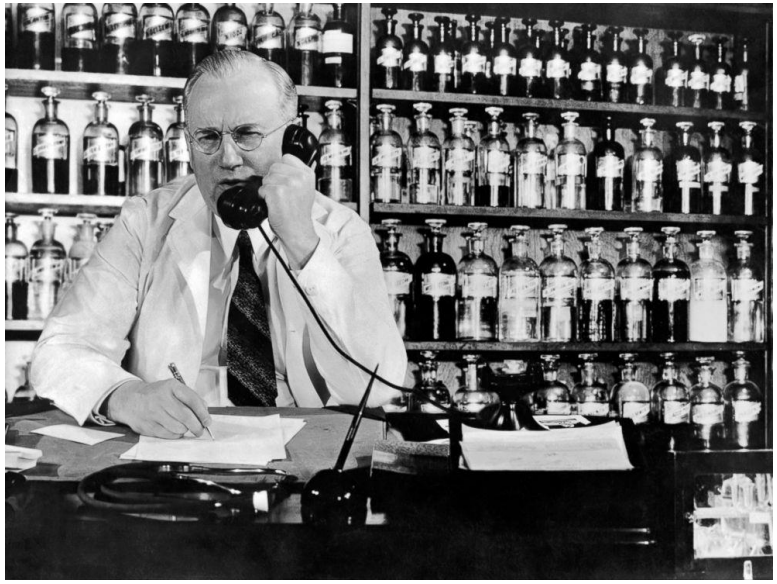
Academic Programs

- Undergraduate Degree
  - Bachelor of Science in Pharmaceutical Sciences
- Double Dawgs BS/MS Degree in 5 YR
- Professional Degree
  - What is the Difference Between a Pharmaceutical Scientist and a Pharmacist?
- Graduate Program in Pharmaceutical and Biomedical Sciences
  - Masters
  - PhD

The University of Georgia

CAREER PATH

PHARMACEUTICAL SCIENTIST vs REGISTERED PHARMACIST



- **Design and develop** new safe and effective medicines
- Drug discovery & Drug delivery
- Experts in **chemistry and biology**

- Provide **advice** on the safe and effective **USE** of medicines
- Patient care, Pharmacies, Hospitals

Is a Career in the Pharmaceutical Sciences Right for Me?

How Do I Know If a Career in the Pharmaceutical Sciences is Right for Me?

- Do you enjoy science and want to pursue a science-based career?
- Do you like to work hands-on in a laboratory setting?
- Do you have a desire to contribute to the health and well-being of society through the development of medicines and therapies?

If so, a career in pharmaceutical sciences may be a good choice for you!

B.S. Pharmaceutical Sciences

❑ Background

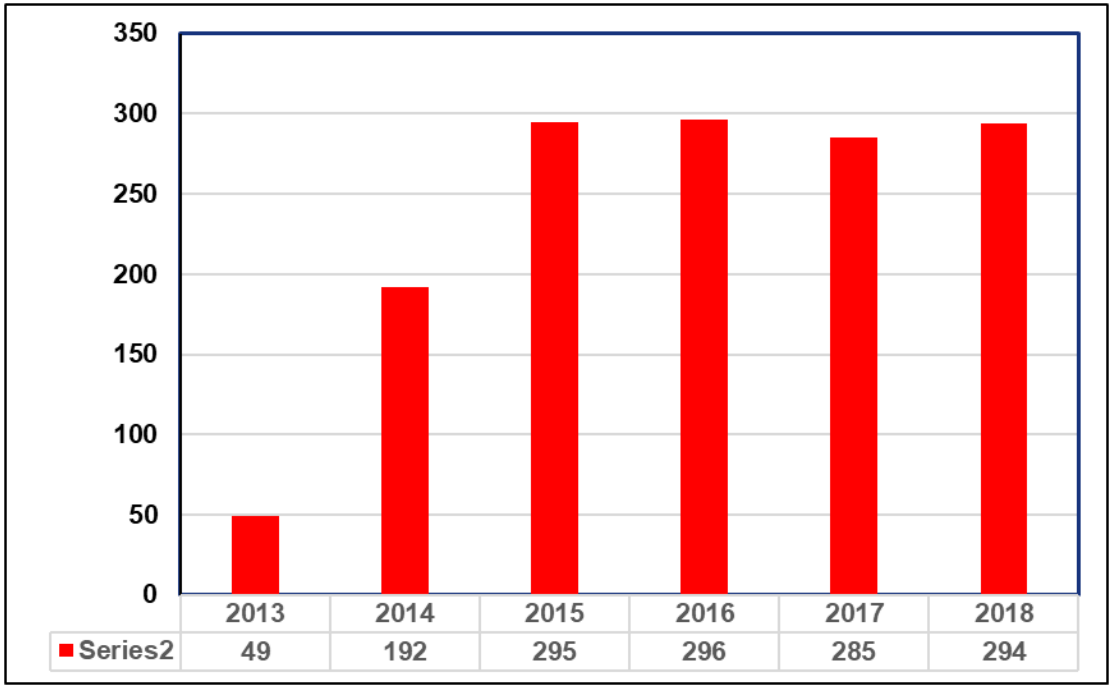
- ✓ replace the old B.S. Pharmacy program as an entry level degree for industry
- ✓ provide a more appropriate and interdisciplinary background for advanced degree(s) focused on drug development

❑ Objective

- ✓ prepare students with broad training in mathematics and basic sciences with a strong emphasis on the pharmaceutical sciences
- ✓ graduates will be able to integrate their knowledge with significant research experience to enhance career path development

Major in Pharmaceutical Sciences

- Started in 2013
- 1st BS PS 2015
- 1st BS/MS Class
  Started 2018
  Graduated 2019



Numbers represent – Pre-Pharmacy and Pharmaceutical Sciences major students

Structure of Program

- Two years of math and basic sciences
- Fulfill GA general education core requirements
- Final two years at the College of Pharmacy
  - **Courses and labs in Pharmaceutical Sciences**
  - **Undergraduate Research**
  - **Major Electives**

Admission Statistics

2022: A Competitive Class

99%

took at least one course at an advanced level such as AP, IB, or Dual Enrollment.

3800

More than 3800 have a core high school GPA of 4.00 or higher.

285

More than 285 graduated first or second in their class.

UGA General Education Core Curriculum

Core Area	Courses
I	ENGL 1101, ENGL 1102, MATH 2250
II	CHEM 1211+L, BIOL 1107+L
III	PHYS 1211 or PHYS 1211+L
IV	World Language and Culture, COMM 1110 or COMM 1500
V	History and 2 Social sciences
VI	CHEM 1212+L, CHEM 2211+L, CHEM 2212+L, STAT 2000

Freshman Year

Fall

Course	Description	Credits
ENGL 1101	Eng. Comp. I	3
CHEM 1211	Fresh. Chem. I	3
CHEM 1211L	Lab	1
MATH 2250	Calculus I	4
Gen Elective	Area IV or V	3
FYOS 1001	Odyssey Sem.	1
Semester		15

Spring

Course	Description	Credits
ENGL 1102	Eng. Comp. II	3
CHEM 1212	Fresh. Chem. II	3
CHEM 1212L	Lab	1
PHYS 1211/L	Prin. of Physics	4
COMM 1110	Intro. Pub. Sp.	3
Semester		14

- **For Full HOPE / Zell Miller Scholarships 15 credit hours is reqd per semester**

Sophomore Year

Fall

Course	Description	Credits
CHEM 2211	Org. Chem. I	3
CHEM 2211L	Lab	1
BIOL 1107	Prin. of Biology	3
BIOL 1107L	Lab	1
PE Elective	Phys. Education	1
Gen Elective	Area IV or V	3
Gen Elective	Area IV or V	3
Semester		15

Spring

Course	Description	Credits
CHEM 2212	Org. Chem. II	3
CHEM 2212L	Lab	1
STAT 2000	Intro Stats	4
PMCY 2020	Pills, Potions and Drugs in Modern Med.	3
Elective	Area IV or V	3
Elective	Area IV or V	3
Semester		17

Admission Requirements

- Cumulative GPA of 2.5 or higher (60 Hours)
- ENGL, MATH, BIOL, CHEM, PHYS, Courses
- Grade of “C” or better
- “Intended Pharmaceutical Sciences Major”
- STUDENT ADVISING

Student Advising / Questions

- Franklin College Advising Office (Years 1 & 2)
  - Ilya Winham or Samantha Pattillo
- College of Pharmacy (Years 3 and 4)
  - Leslie Standridge
- Make appointments using SAGE
- Website www.rx.uga.edu
  - Program information
  - Scholarships / Internships information

Junior Year

Fall

Course	Description	Credits
BCMB 3100	Biochemistry	4
PMCY 3000	Human Physiology	4
PMCY 3500	Pharm. Analysis	3
MATH 2260	Calculus II	4
Semester		15

Spring

Course	Description	Credits
PMCY 3200	Pharm. Sci. I	3
PMCY 3300L	Pharm. Tech.	1
PMCY 3800	Pharmacology	3
PMCY 4300	Med. Chem.	3
Major Elective	PMCY, BIOL,.	3
Gen. Elective	Area IV or V	3
Semester		16

- **Other courses may be selected depending on total credit requirements**
- **For Transfer Credits www.admissions.uga.edu/transfer**

Senior Year

Fall

Course	Description	Credits
PMCY 4200	Pkinetic & P'dynam	3
PMCY 4500/L	Pharm Drug Dev.	4
PMCY 4960	Pharm Research I	2
ENGL 3590W	Tech Writing	3
Major Elective	PMCY, BIOL,….	3
Semester		15

Spring

Course	Description	Credits
PMCY 4600	Biological Therapeutics	3
PMCY 4510/L	Adv Drug Dev	4
PMCY 4970	Pharm Researc II	2
Major Elective	PMCY, BIOL …	4
Semester		13

Experiential Learning (EL)

- PMCY 4960 Pharmaceutical Sciences Research I
- PMCY 4960 / 4970 (2 Credits each)
- Approved Research Courses – BIOL 3110L, GENE 4210L / 4220L / 4230L / 4240L
- CURO Res Assistantship / Summer Fellowship $$$
- INTERNSHIPS ($$$)
  - Pharmaceutical Companies, UGA I-Corps
  - Study Abroad

Experiential Learning
UNIVERSITY OF GEORGIA

'Learning by doing' April 2015

UGA to become one of largest public universities in US to require experiential learning for undergraduates

Major Electives

- Total of 9 -10 credit hours required
- Electives can be chosen to meet professional school admissions requirements
  - Pharmacy School (PharmD), Medical School
  - Physician Assistant, Nursing, Public Health
  - Sales/Marketing
- BIOL, CHEM, PHYS, STAT, PMCY Courses
- At least 2 courses must be at 3000 / 4000 level
- All Major electives must be completed with a "C" or better

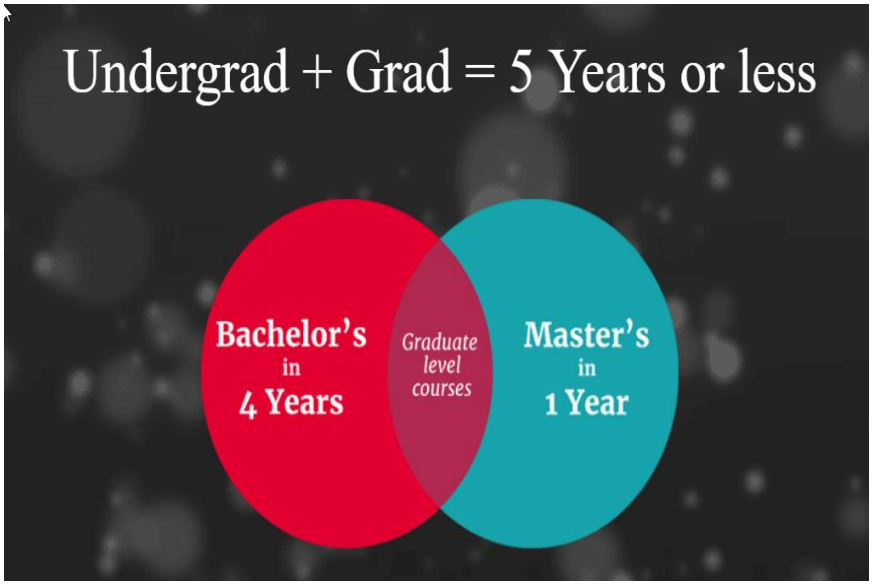
Minor in Pharmaceutical Sciences

- Total of 15 credit hours required
- 9 hours of PMCY courses (3000 or above)
- 6 hours from the major electives list
- Area VI courses can be counted for your minor
- MAJORS - Biology, Chemistry, Marketing
- MAJORS - BioChemical Engineering

BS/MS

DoubleDawgs
The University of Georgia Advantage

- **Ambitious and Motivated Students**
- **AP Credits ~ 30 credits**
- **Competitive Advantage**
- **Career Placement – jobs**
- **Graduate / Medical Programs**
- **Interdisciplinary Education**
- **MS Tracks**
  - Pharmaceutical Sciences
  - Regulatory Sciences



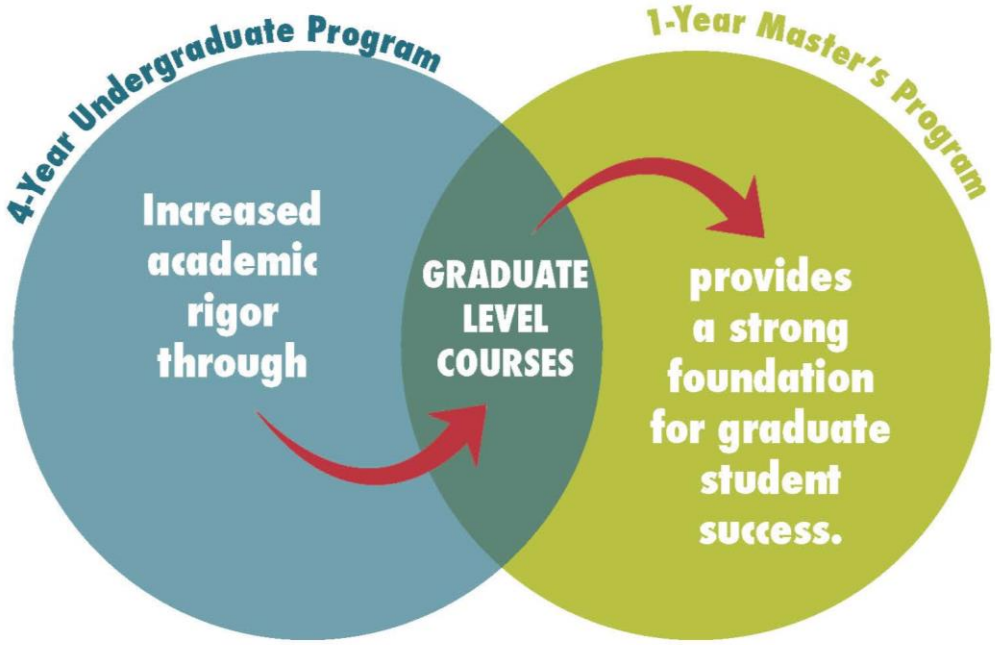
- **New Tracks – Proposed**
  - Public Health, Engineering, Management, Pharmacy, Law
  - Bio fermentation (Biotechnology)

UNIVERSITY OF GEORGIA

DOUBLE DAWGS PROGRAM

QUALITY & RIGOR

GRADUATE LEVEL COURSES taken while earning an undergraduate degree benefit the student and the quality of the degree program.



Because graduate-level courses taken during an undergraduate degree program count toward a master's degree, students can finish both degrees in 5 years rather than the traditional 6 years.

THE UGA ADVANTAGE: Double Dawgs

Excellent Gateway for

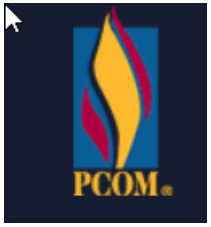
- **Professional Schools**
  - **Pharmacy, Medical, Nursing,**
  - **Dental, Veterinary, Physician Assistant**
- **Graduate Studies**
  - **MS, PhD Pharmaceutical & Biomedical Sciences**
  - **Regulatory and Clinical Programs**
- **Career & Job Opportunities**
  - **Pharmaceutical, Biopharmaceutical**
  - **Government, Research Universities**
  - **Medical Devices, Nutraceuticals, Cosmetics**

Spring 2019 Graduating Class

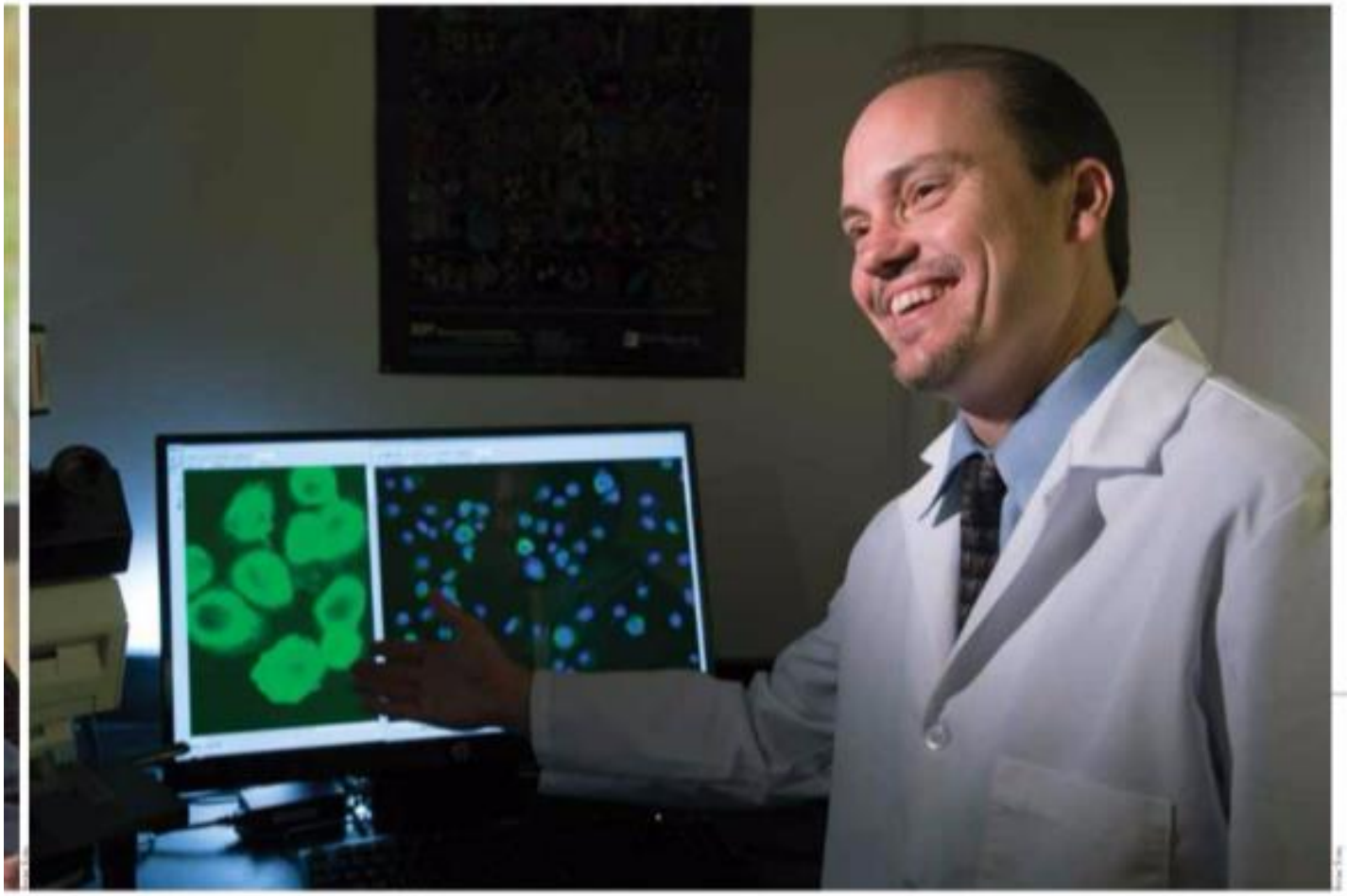
Graduate Schools / Professional Programs

MBB Program

Molecular & Cellular Biology in Seattle
AN INTERDISCIPLINARY Ph.D. PROGRAM *offered through the*
UNIVERSITY OF WASHINGTON *and* FRED HUTCH



THE UNIVERSITY OF GEORGIA MAGAZINE



"I could have gone into medicine and become a doctor and maybe helped thousands of people in my lifetime, but if you develop a drug, you can help millions."
—Rick Shimkets

Kirby Alton (BS '74, PhD '81), far left, and Rick Shimkets (BS '93) are leaders of Abeome, a biotech startup incubated through Innovation Gateway, UGA's technology transfer program. The company focuses on creating antibodies targeted to autoimmune diseases.

http://ugamagazine.uga.edu/issue/september-2016

THANK YOU!

Questions