

Tracy A. Brooks, Ph.D.

Department of BioMolecular Sciences

Division of Pharmacology

University of Mississippi

University, MS, 38677

1. Formal Course Instruction**a. University of Mississippi**

- i. PHCL 444, Spring 2012, 4 cr. lecture, Basic and Clinical Pharmacology II for PY2 Pharmacy Students, 15 lectures; overall grade of instructor: 4.9, enrollment = 54
- ii. PHCL 443, Fall 2012, 4 cr. lecture, Basic and Clinical Pharmacology I for PY2 Pharmacy Students, 18 lectures; overall grade of instructor: NA, enrollment = 78
- iii. PHCL 382, Fall 2012, 2 cr. lecture, Fundamentals of Cancer, elective for PY2 Pharmacy Students, 32 lectures (course director); overall grade of instructor: 4.9, enrollment = 14
- iv. PHCL 444, Spring 2013, 4 cr. lecture, Basic and Clinical Pharmacology II for PY2 Pharmacy Students, 23 lectures (course director); overall grade of instructor: 4.4, enrollment = 74
- v. PHCL 444r, Summer II 2012, 4 cr. lecture, Basic and Clinical Pharmacology II remediation for PY2 Pharmacy Students, 9 lectures (course director); Overall grade of instructor: 5, enrollment = 6
- vi. PHCL 382, Fall 2013, 2 cr. lecture, Fundamentals of Cancer, elective for PY2 Pharmacy Students, 32 lectures (course director); overall grade of instructor: 4.9, enrollment = 37
- vii. PHCL 444, Spring 2014, 4 cr. lecture, Basic and Clinical Pharmacology II for PY2 Pharmacy Students, 32 lectures (course director); overall grade of instructor: 4.9, enrollment = 107
- viii. PHCL 564, Spring 2014, 4 cr. lecture, Introductory Pharmacology II for graduate students in the Pharmaceutical Sciences, 32 lectures (course director); overall grade of instructor: 4, enrollment = 7
- ix. PHCL 643, Spring 2014, 1 cr. seminar, Seminar: Current Topics in Pharmacology and Toxicology for Pharmacology graduate students, 16 meetings (course director); overall grade of instructor: 3.6, enrollment = 12
- x. PHCL 443, Fall 2014, 4 cr. lecture, Basic and Clinical Pharmacology I for PY2 Pharmacy Students, 38 lectures (course director); overall grade of instructor: 4.7, enrollment = 120
- xi. PHCL 563, Fall 2014, 4 cr. lecture, Basic and Clinical Pharmacology I for PY2 Pharmacy Students, 38 lectures (course director); overall grade of instructor: NA, enrollment = 3
- xii. PHCL 444, Spring 2015, 4 cr. lecture, Basic and Clinical Pharmacology II for PY2 Pharmacy Students, 35 lectures (course director); overall grade of instructor: ongoing, enrollment = 113
- xiii. PHCL 541, Spring 2015, 3 cr. lecture, Fundamentals of Cancer for graduate students, elective for graduate students in the Pharmaceutical Sciences, 32 lectures (course director); overall grade of instructor: ongoing, enrollment = 7

b. University of Arizona

- i. PCOL 837b, 2008 – 2010, Medicinal Chemistry for P2 Pharmacy students. Taught lectures in Neuroregulation, Gonadal Hormones, and Targeted Cancer Therapeutics
- ii. PCOL 820 and 821, 2008 – 2010, Case Studies in Pharmacology, Facilitator

- iii. PhPr822, 2009 – 2010, Case discussions in Pharmacology and Pharmaceutical Chemistry, Facilitator
- c. Pima Community College (all as course instructor)
 - i. BIO 181IN, 2005, General Biology I for undergraduate science majors
 - ii. BIO 201IN, 2007 – 2011, Anatomy and Physiology I for nursing majors; taught in entirely didactic and hybrid online formats
 - iii. BIO 202IN, 2010 – 2011, Anatomy and Physiology I for nursing majors; taught in entirely didactic and hybrid online formats
 - iv. BIO 160IN, 2011, Anatomy and Physiology for non-majors
- d. Cochise College (all as course instructor)
 - i. CHM130IN, 2005, Fundamental Chemistry for undergraduate science majors
 - ii. BIO101, 2006 – 2011, Introductory Biology for non-Majors, online-format

2. Course Development

- a. PHCL 382, Fundamentals of Cancer for pre-pharmacy and graduate students, University of Mississippi, School of Pharmacy, 2011 –
- b. PHCL 643, Seminar: Topics in Pharmacology and Toxicology. Fall 2013 - Spring 2014 was revised to provide student development with public speaking, including impromptu speeches, consideration of “um’s”, and idiosyncrasies for individual students

3. Efforts to Improve Teaching

- a. University of Mississippi
 - i. “Simple Steps Towards Transformative Teaching”, 2013
 - ii. “Record Lectures at Your Desk”, 2013
 - iii. “Make your PowerPoint Sizzle, not Fizzle”, 2013
 - iv. “Evidenced Based Strategies to Promote Student Learning and Academic Success”, 2015
- b. American Association for Colleges of Pharmacy
 - i. Teaching Institute, 2013
- c. CAE/CATS
 - i. Tier 1 Teaching Excellence Workshop, 2012

4. Awards and Recognition for Teaching

- a. Mentor, Arizona Assurance Program, 2009 – 2010
- b. Mentor, University of Arizona NASA Space Grant Consortium, 2010 – 2011
- c. Mentor, University of Mississippi McNair Program for underrepresented minority students, 2012 – 2013
- d. Teacher of the Year, University of Mississippi, School of Pharmacy, PY2, 2012 – 2013

5. Service for Teaching and Learning

- a. Member, PDAT organization committee, University of Mississippi, School of Pharmacy, 2012
- b. Advisor, Pre-Pharmacy program, University of Mississippi, School of Pharmacy, 2012 –
- c. Advisor, PDAT professional student program, University of Mississippi, School of Pharmacy, 2012 –
- d. Secretary (2012 – 2014) and Chair (2014 –), Student Faculty Relations Committee, University of Mississippi, School of Pharmacy 2012 –
- e. Member, Scholastic Standards Committee, University of Mississippi, School of Pharmacy 2014
- f. Member, Honors and Awards Committee, University of Mississippi, School of Pharmacy 2014 –

- g. Member, BioMolecular Sciences Graduate Education Realignment Committee, University of Mississippi, School of Pharmacy, Department of BioMolecular Sciences, 2014 –

6. Advising and Mentoring

a. Graduate Research Supervision

Year	Name	Program of Study
2008 – 2010	Jessica Fortin	Co-Advisor, Drug Discovery and Development
2009	Xi Chen	Laboratory Rotation, Drug Discovery and Development
2009 – 2011	Robert Brown	Laboratory Rotation and thesis work, Drug Discovery and Development
2010	Angela Davis	Laboratory Rotation, Drug Discovery and Development
2010	Cory Burgess	Laboratory Rotation, Drug Discovery and Development
2010 – 2011	Christine Kaiser	Laboratory Rotation and thesis work, Drug Discovery and Development
2010 – 2011	Caleb Sutherland	Laboratory Rotation and thesis work, Cancer Biology
2012	Heather Lewis	Laboratory Rotation, PharmD student
2012 – 2013	Jennifer (Chi-Fan) Hockings, Ph.D.	Laboratory Rotation and Pathways Project Co-advisor, PharmD student
2012 – 2013	Joseph Lee	Laboratory Rotation and Pathways Project Supervisor, PharmD student
2012 –	Tierra Gaillard	Laboratory Rotation and Pathways Project Supervisor, PharmD student
2013 –	Keshia Dykes	Thesis rotation, Chemistry and Biochemistry, M.S.
2013 –	Rhianna Morgan	Thesis advisor, Pharmacology, Ph.D.
2014 –	Kandis Backus	Thesis advisor, Pharmacology, Ph.D.
2014 –	Harshul Batra	Thesis advisor, Pharmacology, Ph.D.
2014 –	Taisen Hao	Thesis advisor, Pharmacology, Ph.D.
2014	Maria Laura Greco	Ph.D. Candidate Intern from Italy, 3 months summer 2014

b. Undergraduate Student Research Supervision

Year	Name	Program of Study	Outcome
2004	Caroline Quigley	Undergraduate Independent Research	Graduated with B.S., currently in Medical School in Chicago
2004 – 2006	Rachel Charles	Undergraduate Independent Research	Graduated with B.S., currently completing M.PH program, applying to medical school
2004 – 2006	Nikki Nametz	Undergraduate Independent Research	Graduated with B.S., currently in Medical School at UA
2007 – 2008	Ravi Goyal	Undergraduate Independent Research Thesis project – Biochemistry and Molecular Biophysics (BMB)	Graduated with B.S.
2008 – 2009	Vanessa Gaerig	Undergraduate Independent Research Thesis project – BMB	Graduated with B.S. Technician in my UA laboratory, PY2 Pharm.D. student at UA
2008 – 2009	Misha Pangasa	Undergraduate Biology Research Program	Graduated with B.S., attending Columbia Medical School

2008 – 2009	Matthew Karolak	Undergraduate Research – Molecular and Cellular Biology (MCB)	Independent	Graduated with B.S., obtaining Ph.D. at Vanderbilt University
2008 – 2010	Jessica Kashian	Undergraduate Research Thesis project – BMB	Independent	Graduated with B.S. Works as industry technician in CA
2008 – 2009	Jessica Shelton	Undergraduate Research - Physiology	Independent	Graduated with B.S. Applying to D.O. school
2009 – 2011	Forest Danford	Undergraduate Research – Biomedical Engineering, NASA Space Grant Consortium Fellow	Independent	Undergrad worker in UA, NASA mentee, currently employed in research laboratory
2009	Claudia Meece	Summer Minority Health Disparities Program		PY2 Pharm.D. program at UA
2009 – 2010	Ravi Ram	Undergraduate Research - Physiology	Independent	UA undergrad volunteer/worker, currently UA senior
2009 – 2011	Alexa Williamson	Undergraduate Research - MCB	Independent	UA undergrad volunteer/worker, currently UA senior applying to Medical School
2010 – 2011	Edward Bastidas	Undergraduate Research - MCB	Independent	Former PCC student, worked in UA laboratory, currently in nursing school
2010	Kaity Kepler	CapStone Project, Vail School District, AZ		Current University of Arizona Student
2010	Megan Wittenberg	KEYS program, University of Arizona		Arizona State University Student (B.S.)
2012	Taasha Simmons	McNair Fellow, University of Mississippi		Completed B.S. in Biology at Rust College, preparing to pursue Ph.D.
2012 –	Kristen Greer	Undergraduate Research – Pre-Pharmacy	Independent	PY1 completing BS/PS, continuing into Pharm.D. program
2012 –	Rachel Jenkins	Undergraduate Research – Pre-Pharmacy	Independent	Early Entry Pharmacy/Honors student
2013	Ashley King	McNair Fellow, University of Mississippi		Completing B.S. in Biology at Tougaloo College, preparing to pursue Ph.D.
2013 –	Neal Ainsworth	Undergraduate Research – Pre-Pharmacy	Independent	PY1 completing BS/PS, continuing into Pharm.D. program
2013 – 2014	Robert Ricks	Undergraduate Research – Pre-Pharmacy	Independent	PY1 completing BS/PS, continuing into Pharm.D. program
2014	Kelly Powell	Undergraduate Research	Independent	Honors student
2014	Quinea Lassiter	Undergraduate Research – Summer 2014	Independent	Senior at the University of Arizona
2014 –	Melissa Holy	Undergraduate Research – Pre-Pharmacy	Independent	Early Entry Pharmacy/Honors student
2014	Abraham Kim	Undergraduate	Independent	Early Entry Pharmacy/Honors

–		Research – Pre-Pharmacy	student
2014	Kelsey Raymer	Undergraduate Independent	Early Entry Pharmacy
–		Research – Pre-Pharmacy	

c. *Graduate Student Committee Service:*

- i. Krishna Nagalla, Ph.D. Pharmaceutical Sciences – Pharmacology, completed 2013
- ii. Pranapda Aumsuwan, Ph.D. Pharmaceutical Sciences – Pharmacology, completed 2014
- iii. Eric Bow, Ph.D. Pharmaceutical Sciences – Medicinal Chemistry, expected 2016
- iv. Annie McClellan, M.S. Chemical Engineering, expected 2016

7. Teaching Philosophy

My teaching goal is always to instill deep learning that carries students through their classes, their careers, and their lifetimes. I seek to teach my students how to study effectively, and how to think in the big picture while applying the knowledge gained in their classes to real-life situations. These aims have guided my development as an educator in the sciences, and in relation to the pharmaceutical sciences in particular.

I have always been interested in teaching, and enjoy the process. Although I was not required to do so during my graduate career, I often sought out opportunities to take on a teaching role, such as when I lectured in a summer oncology course for high school students. After completing my doctorate and beginning my postdoctoral studies, one of my deciding factors in choosing a position was the ability to gain teaching experience in addition to the opportunity to conduct research.

During my post-doctoral time, the classes with which I worked were medical school case studies and did not involve large classes or lectures. I therefore took it upon myself to broaden my scope and undertook more typical classroom education challenges. I began teaching chemistry, then biology, and anatomy and physiology at the local community colleges. I taught such curricula in a variety of formats as well, including didactic lecture, completely online, and a hybrid of the two. During my time as a research assistant professor, I also delivered some six or seven lectures of the medicinal chemistry course for Pharm.D. students at the University of Arizona, and facilitated case studies for first and second year pharmacy students.

Since beginning my independent career at the University of Mississippi, I have a number of teaching responsibilities within the School of Pharmacy. In particular, by the end of this current year, I will have taught the entire year worth of pharmacology courses for the professional students, with topics ranging from nuclear hormone receptors, adrenergic signaling, immunology, anti-neoplastics, and much more. I also created and taught an elective on the Fundamentals of Oncology, reviewing the basics of Cancer Biology. Both of these classes have been well received, and in the first year I was eligible, I was awarded the “Teacher of the Year” award for second year pharmacy students (2012-2013).

In my teaching and mentoring, I whole-heartedly adopt the philosophy of active participation and include real-life examples and applications, in-lecture embedded questions, and have an overall engaging style that helps increase students’ retention of the material. I have been dedicated to excellence in teaching since I began, and work diligently to assess my techniques, and to learn new methods. In this vein I have attended workshops within the University of Mississippi through the Center for Excellence in Teaching and Learning, through

outside workshops, such as the Center for Astronomy Education's "Teaching Excellence Workshop" focused on active and effective teaching strategies, and through participation in the American Association of Colleges of Pharmacy Teaching Institute in 2013.

In my commitment to teaching and education, I am a member of the committee restructuring the graduate student guidelines for the newly combined department of BioMolecular Sciences. In this committee we work to ensure that we develop a rigorous, effective, and balanced program that fosters graduate student development in and out of the classroom. Skills such as grant writing, public speaking, and ethics are vital components of students' growth, which I seek to instill on all students in my lab. I have been privileged to welcome four doctoral students into my lab since the inception of my independent career at the University of Mississippi, along with numerous undergraduate and pharmacy students. All four of the Ph.D. students are currently in their second year, and each has given at least one poster presentation. One of these students has already obtained her own grant funding (\$1000 from the Graduate Student Council at the University of Mississippi) and won an award for her poster presentation. Three of the students will be presenting their findings at the national American Association for Cancer Research annual meeting in April of 2015. We have seen the first publication from their work in press already, and several more are in various stages of preparation or revision. One of the undergraduate students working in my laboratory for the last 2 years was awarded the Taylor Medal for the University of Mississippi. I am enormously proud of my students' growths and successes to date, and I am eager to continue to work with them through the graduate process and beyond. For me, teaching does not end at the classroom door, or at graduation. It is a lifelong endeavor, requiring creativity, dedication, and ingenuity, and one to which I am wholly invested.