

Brittany D. Jenkins

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843.425.0018

EDUCATION

Doctor of Philosophy, Genetics, 3.81 GPA May 2019
PhD Candidate
University of Georgia, Athens, Georgia

Master of Science, Biotechnology, 4.0 GPA May 2014
Claflin University, Orangeburg, South Carolina
Thesis: Role of *Moraxella catarrhalis* ABC transporters and RND efflux pumps in cationic antimicrobial peptide resistance

Bachelor of Science, Genetics May 2010
Clemson University, Clemson, South Carolina
Research Project: Energy Recapture and Biochemical Production from Glycerol

RESEARCH EXPERIENCE

Student Researcher

Department of Public Health Sciences, Henry Ford Health System, Detroit, Michigan Aug 2017-present
Advisor: Dr. Melissa B. Davis

- Performing dissertation-level research with the breast oncology program at Henry Ford Health System, led by Dr. Lisa Newman, an award-winning surgical oncologist and director of the breast oncology program.
- Gaining exposure to molecular and genetic epidemiology through research in breast oncology program, including weekly interactions and networking with oncologists, radiologists, epidemiologists, research nurses, and grant specialists.
- Attend weekly multi-disciplinary tumor boards where new patient cases and courses for best treatment are discussed.

Graduate Research Assistant

Sept 2015-present

Genetics Department, University of Georgia, Athens, Georgia
Advisor: Dr. Melissa B. Davis

- Defining the role of the atypical chemokine receptor DARC/ACKR1 gene in modifying tumor immunogenicity during tumorigenesis. Specifically, measuring differences in chemokine profiles and immune cell response in breast cancer progression, comparing DARC negative vs DARC positive tumors.
- Determining DARC isoform-specific functions, as it relates to chemokine interactions, in circulation and within the breast microenvironment.

Graduate Research Assistant

Jan 2015-Sept 2015

Pharmaceutical and Biomedical Sciences Department, University of Georgia, Athens, Georgia

Advisor: Dr. Scott Pegan

- Investigated the deubiquitinating/deISGylating specificity and activity of the viral ovarian tumor domains (vOTU) of several nairoviruses, including various strains of the Crimean-Congo Hemorrhagic Fever Virus.
- Performed selective mutagenesis, enzymatic binding assays, and X-ray crystallography to better understand the amino acid sites controlling the activity of the various vOTUs.

Graduate Research Assistant

Oct 2012–May 2014

Biology Department, Claflin University, Orangeburg, South Carolina

Advisor: Dr. Randall Harris

- Mutated ABC transporter and RND efflux pump genes of *Moraxella catarrhalis* to prevent cationic antimicrobial peptide resistance.
- Worked to prevent antibiotic-resistant otitis media (caused by *Moraxella catarrhalis*) from causing inner ear infections in newborns and small children.
- Developed technical skills in overlap PCR, gel electrophoresis, mutant construction, enzymatic assay development, DNA isolation, RNA isolation and microarray analysis.

Real-Time Polymerase Chain Reaction (qPCR) Trainee

Jan 2013

Minority Traineeship in Biotechnology, National Institutes of Health, Bethesda, Maryland

- Selected to isolate and amplify buccal cell DNA and K562 cell RNA using qPCR.
- Used amplified SIX6 gene to identify its translocation in chronic myelogenous leukemia.
- Amplified blood DNA by qPCR using the Roche Light Cycler LC480.
- Developed technical skills in real-time and quantitative PCR and gel electrophoresis.

Microbiology Undergraduate Research Assistant

Aug 2009-Apr 2010

Clemson University, Clemson, South Carolina

Advisor: Dr. Harry Kurtz

- Tested approximately 100 isolates of methylobacterium to determine which grow best on glycerol.
- Determined a viable bioprocess for the conversion of excess glycerol to additional biofuel and high value biochemicals.
- Worked with a five-person team of undergraduates to add significant value to the biodiesel stream, potentially reducing cost to the consumer.

TEACHING EXPERIENCE

Graduate Lab Assistant

Jan 2016-July 2016

Department of Biological Sciences, University of Georgia, Athens, Georgia

- Independently taught lab sections of Biology for majors and non-majors (approximately 20 students per section) with the support of the Biological Sciences department.
- Graded and provided meaningful feedback on student lab assignments within the writing intensive portions of the course.
- Lead a weekly discussion and lab activity with students about concepts in biology relating to antibiotic resistance, enzyme inhibition, genetics and heritability, organismal diversity, and among many others.

Graduate Teaching Assistant Jan 2015–Aug 2015

Pharmaceutical and Biomedical Department, University of Georgia, Athens, Georgia

- Assisted the instructor on several hands-on pharmacy skills labs for first-year pharmacy students.
- Graded labs and provided support for over 150 first-year pharmacy students.
- Kept up with current lesson plans and information to effectively guide the students through their weekly labs.

Peer Tutor/Peer Counselor June 2014–July 2014

ENVIRO-TEMPs Summer Bridge Program, Claflin University, Orangeburg, South Carolina

- Tutored and assisted the instructor in a 6-week entry-level environmental science college course.
- Engaged entry-level freshman students with a variety of games, presentations, and creative test preparatory techniques for success within the course.
- Assisted in hands-on laboratory experiments, field trips, course grading, and other assignments.
- Attended tutoring counselor and peer counselor training sessions.

Graduate Teaching Assistant Aug 2012–May 2013

Biology Department, Claflin University, Orangeburg, South Carolina

- Co-instructed a junior-level human anatomy laboratory course for 52 undergraduate students in the fall semester.
- Led engaging and educational laboratory experiments in the spring semester for a junior-level physiology laboratory course comprised of 40 undergraduate students majoring in biology and chemistry.

INTERNSHIPS

Genetic Counseling Summer Internship June 2010–July 2010

University of South Carolina, School of Medicine, Columbia, South Carolina

- Selected as the first genetic counseling intern at the University of South Carolina School of Medicine.
- Observed over 50 patient appointments in prenatal, pediatric, and cancer genetic counseling.
- Learned techniques necessary to become an effective member of the medical community, including taking family histories, completing HIPAA training, and learning the correct demeanor for patient interaction.

PROFESSIONAL MEMBERSHIPS

Student Member Nov 2013–present

American Association for Cancer Research Member ID: 287574

Chapter President, Founding Member Dec 2014–May 2017

Graduate Research Assistants Diversifying STEM (GRADS)
University of Georgia Chapter, Athens, Georgia

- Graduate organization formed to promote diversity within the STEM disciplines at UGA
Chapter Secretary Apr 2016-May 2017
 Genetics Graduate Student Association, Athens, Georgia
- **Chapter President** May 2009-Apr 2010
 National Society of Black Engineers, Clemson, South Carolina
- Directed the Chapter Executive Board in my strategic vision that led to over \$7,000 in corporate sponsorship, several community service activities, and the recruitment of the highest number of NSBE Jr. participants in chapter history.
- **Chapter Treasurer** May 2009-Apr 2010
 Zeta Phi Beta Sorority, Inc., Eta Nu Chapter, Clemson, South Carolina

PEER-REVIEWED PUBLICATIONS

Zhao W, Cheng R, **Jenkins BD**, Zhu T, Okonkwo NE, Jones CE, Davis MB, Kavuri SK, Hao Z, Schroeder C, Mao L. *Label-free ferrohydrodynamic cell separation of circulating tumor cells.* Lab on a Chip. Royal Society of Chemistry. 2017.

Brittany D. Jenkins, Rachel N. Martini, Rupali Hire, Andrea Brown, Briana Bennett, I' nasia Brown, Elizabeth W. Howerth, Mary Egan, Jamie Hodgson, Clayton Yates, Rick Kittles, Dhanajay Chitale, David Nathanson, Petros Nikolinakos, Lisa Newman, Michele Monteil and Melissa B. Davis. *Expression of Atypical Chemokine Receptor 1 (ACKR1) in breast tumors is associated with African ancestry, survival, and circulating pro-inflammatory chemokines.* (SUBMITTED)

Ilya Rakitin MD; Mary Quigg MD; Mary Nyhuis MD; **Brittany Jenkins PhDC**, Rachel Nicole Martini PhDC; Lindsay Petersen MD; S. David Nathanson MD; Laura Susick PhD; Erica Proctor MD; Jessica Bensenhaver MD MS; Marcia Kuklinski RN; Alyson Simonds RN; Lisa Newman MD MPH; Davis Melissa PhD. *Impact of National Comprehensive Cancer Network (NCCN) genetic testing guidelines on genetic counseling referral patterns for triple negative breast cancer patients.* (SUBMITTED)

CONFERENCES/PRESENTATIONS

"Serum-derived exosomes exhibit differential mRNA expression of CD8+ T-cells and B-cells in African-American vs. Caucasian breast cancer patients" Henry Ford Research Symposium. Detroit, MI. May, 25, 2018.

"The functional relevance of Atypical Chemokine Receptor 1 (ACKR1/DARC) genetic isoforms in breast cancer" American Association for Cancer Research (AACR) Annual Meeting. Chicago, IL., April 14-18, 2018.

“Circulating CCL2 and CXCL8 levels and receptor interactions differ in African-Americans and Caucasians with breast cancer”. AACR Advances in Breast Cancer Research. Hollywood, CA. October 7-10, 2017.

“Tumor-associated immune cell migration varies based on ancestral informative marker in breast cancer”. HHMI Gilliam Annual Fellowship Meeting. Chevy Chase, MD. September 27-29, 2017.

“Differential expression of two pro-inflammatory chemokines in African-Americans and Caucasians with breast cancer” Health Disparities, Education, Awareness, Research & Training (HDEART) Consortium. Houston, Texas, June 19-24, 2017.

“Atypical Chemokine Receptor 1 (ACKR1/DARC) expressing tumors are associated with distinct recruitment of immune cells and increased pro-inflammatory chemokines” American Association for Cancer Research (AACR) Annual Meeting. Washington, D.C., April 2-5, 2017.

“Tumors expressing epithelial Atypical Chemokine Receptor 1 (ACKR1/DARC) show distinct recruitment of TILs correlating with increased pro-inflammatory chemokines, indicating a unique tumor microenvironment” San Antonio Breast Cancer Symposium. San Antonio, Texas, December 6-10, 2016.

“Distinct recruitment of tumor-associated immune cells correlates with increased pro-malignant chemokines in tumors expressing epithelial Atypical Chemokine Receptor 1 (ACKR1/DARC)” American Association for Cancer Research (AACR) Conference on The Science of Cancer Health Disparities in Racial/Ethnic Minorities and the Medically Underserved. Fort Lauderdale, Florida, September 25-28, 2016.

“Differential recruitment of immune cells and pro-malignant chemokine expression observed in ACKR1 (DARC) negative tumors in breast cancer patients” Health Disparities, Education, Awareness, Research & Training (HDEART) Consortium. Houston, Texas, June 20-25, 2016.

First International Conference on Crimean-Congo Hemorrhagic Fever. CCH Fever. Thessaloniki, Greece, February 13-14, 2015.

“The Role of Moraxella catarrhalis ABC and RND Transporters in Cationic Antimicrobial Peptide Resistance” Emory STEM Symposium. Atlanta, GA, March 26-28, 2014.

“Role of Moraxella catarrhalis ABC Transporter and RND Efflux Pumps in Antimicrobial Peptide Resistance”. Annual Biomedical Research Conference for Minority Students, Nashville, Tennessee, November 13-16, 2013.

National Society of Genetic Counselors Annual Education Conference. Genetic Alliance Advocates Partnership Program. Dallas, Texas, October 14-17, 2010.

“Screening of Methylobacterium sp. isolated from an arid habitat in Utah for the production of EPS and small molecular weight molecules”. HHMI/SC Life Colloquium of Undergraduate Research Oral and Poster Presentation, Clemson, South Carolina, April 16-17, 2010.

HONORS & AWARDS

Patricia and Doyle Mote Fellowship for Biomedical Research Department of Genetics, University of Georgia, Athens, GA	April 2018
Henry Ford Cancer Institute Travel Award Henry Ford Health System, Detroit, MI	Nov 2017
HHMI Gilliam Fellowship for Advanced Study Howard Hughes Medical Institute, Chevy Chase, MD <ul style="list-style-type: none">• \$46,000/year up to 3 years• First student at UGA to win Gilliam Fellowship	June 2017
Graduate Recruitment Opportunities Assistantship UGA Graduate School and Department of Genetics University of Georgia, Athens, GA	Aug 2016-June 2017
Blue Key Honor Society Member University of Georgia Chapter, Athens, GA	Mar 2017
Mary Laraine Young Hines '68 Graduate Fellowship in Cancer Research Franklin College of Arts and Sciences University of Georgia, Athens, GA	Oct 2016
UGA Graduate School Student Travel Grant University of Georgia, Athens, GA	Sept 2016
Scholar-in-Training Award American Association for Cancer Research	Aug 2016
HDEART/ICC Travel Award Recipient HDEART Consortium	June 2016-17
GlaxoSmithKline Scientific Achievement Award GlaxoSmithKline and UNCF	Mar 2013-16
Diana Mossip Memorial Scholarship MENSA Foundation	Mar 2016
NIAID Research Supplement to Promote Diversity National Institutes of Health, Bethesda, MD	Aug 2015

James "Rhio" O'Connor Memorial Essay Scholarship Contest Winner Cancer Monthly Organization	Nov 2014
EGRF Institutional Merit Award University of Georgia, Athens, Georgia	Aug 2014
ILS Summer Bridge Program Nominee University of Georgia, Athens, Georgia	May 2014
UNCF Lowcountry Mayor's Breakfast Student Representative & Speaker North Charleston, South Carolina	July 2014
Future Scholars Visitation Program University of Georgia, Athens, Georgia	Nov 2013
Zeta Phi Beta National Educational Foundation Scholarship Claflin University, Orangeburg, South Carolina	Sept 2013
Minority Traineeship in Biotechnology National Institute of Health, Bethesda, Maryland	Jan 2013
U.S. Department of Education's Masters Degree at HBCUs Scholarship U.S. Department of Education/Claflin University, Orangeburg, South Carolina	Aug 2012