

# Brittany D. Jenkins

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## EDUCATION

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**Doctor of Philosophy, Genetics, 3.81 GPA** May 2019  
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  
Thesis: Energy Recapture and Biochemical Production from Glycerol

## RESEARCH EXPERIENCE

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**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

- Investigating 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.
- Perform selective mutagenesis 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, 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 - April 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**

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### **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.

### **Summer Engineering Experience for Kids**

July 2008 - Aug 2008

National Society of Black Engineers, Washington, D.C.

- Mentored and supported 20 African-American middle school students in a three-week summer program in an under-privileged area of Washington, D.C.
- Learned and implemented a hands-on S.T.E.M. curriculum (developed by the Society of Automotive Engineers International) to expose students to the roles and responsibilities of an engineer.
- Helped coordinate the final presentation and design competition that the students participated in at the end of the program.

## **INTERNSHIPS**

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### **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**

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### **Chapter President, Founding Member**

Graduate Research Assistants Diversifying STEM (GRADS)

Athens, Georgia

December 2014-May 2017

- Graduate organization formed to promote diversity within the STEM disciplines at the University of Georgia and within the Athens community.

### **Student Member**

Nov 2013 - Present

American Association for Cancer Research Member ID: 287574

### **Chapter Secretary**

April 2016-May 2017

Genetics Graduate Student Association, Athens, Georgia

### **Chapter President**

May 2009 - April 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 - April 2010

Zeta Phi Beta Sorority, Inc., Eta Nu Chapter, Clemson, South Carolina

## PUBLICATIONS

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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.

## CONFERENCES/PRESENTATIONS

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*“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**

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HHMI Gilliam Fellowship for Advanced Study Howard Hughes Medical Institute, Chevy Chase, MD	June 2017
<ul style="list-style-type: none"><li>• \$46,000/year up to 3 years</li></ul>	
GRO Fellowship 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 University of Georgia, Athens, GA	March 2017
Mary Laraine Young Hines '68 Graduate Fellowship in Cancer Research Franklin College of Arts and Sciences University of Georgia, Athens, GA	October 2016
UGA Graduate School Student Travel Grant University of Georgia, Athens, GA	September 2016
Scholar-in-Training Award American Association for Cancer Research	August 2016
HDEART/ICC Travel Award Recipient HDEART Consortium	June 2016,17
GlaxoSmithKline Scientific Achievement Award GlaxoSmithKline and UNCF	Mar 2013, 14, 15, 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 Claflin University, Orangeburg, South Carolina	Aug 2012
Region II Distinguished Chapter of the Year National Society of Black Engineers, Alexandria, Virginia	Apr 2007
Delta Sigma Theta Scholarship Clemson University, Clemson, South Carolina	Aug 2006
LIFE Scholarship Clemson University, Clemson, South Carolina	Aug 2006