

## Jasmine Shamera Phillips

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### EDUCATION

**NORTH CAROLINA STATE UNIVERSITY, Wilson College of Textiles**  
*Master of Science in Textile Chemistry*

**Raleigh, North Carolina**  
*August 2018 – Present*

**SAVANNAH STATE UNIVERSITY, College of Sciences and Technology**  
*Bachelor of Science in Chemistry*

**Savannah, Georgia**  
*August 2013 – May 2017*

### ACHIEVEMENTS

- Awarded the Chemistry Senior Award by The Coastal Georgia Section of the American Chemical Society, *April 2017*
- Won 1<sup>st</sup> Place in Oral Presentations (Life Sciences-Environmental Biology) at the Peach State LSAMP STEM Innovators Conference 11<sup>th</sup> Annual Symposium & Research Conference, *February 2017*

### PEER-REVIEWED PUBLICATION

*J. Phillips, et al. (2018). Effect of Betulinic Acid and its Ionic Derivatives on M-MuLV Replication. Biochemical and Biophysical Research Communications. 500. 10.1016/j.bbrc.2018.04.080.*

### RESEARCH EXPERIENCE

*“The Study of Adhesion and Separation at Polymer-Polymer Interfaces”*

*North Carolina State University: The Nonwovens Institute: DOD Non-Core Project*

*Mentors: Dr. Ericka Ford and Dr. Behnam Pourdeyhemi*

*Research Assistant*

*May 2019 – Present*

- Working to fabricate flame retardancy among functional, stain resistant nonwovens that exhibit elasticity and breathability

*“Effect of Betulinic Acid and its Ionic Derivatives on M-MuLV Replication”*

*Savannah State University: National Institutes of Health Minority Biomedical Research Support/Research Initiative for Scientific Enhancement (NIH MBRS/RISE) Program*

*Mentors: Dr. Takayuki Nitta and Dr. Hua Zhao*

*Intern*

*February 2016 – May 2017*

- Investigated the effects of betulinic acid in replication and carcinogenesis caused by animal viruses by using betulinic acid and its ionic derivatives to test if this acid could inhibit retroviral replication and cause death of infected cells
- Data suggests our chemicals could inhibit viral release and cell growth in this system

*“Impact of Grazers on Algal Biomass Productivity: Implications for the Biofuel Industry”*

*Oak Ridge National Laboratory: Higher Education Research Experiences (HERE) Program*

*Mentors: Dr. Shovon Mandal and Dr. Teresa Mathews*

*Intern*

*May 2016 – August 2016*

- Identified trade-offs among functional traits that determine the suitability of different algal species as biofuel feedstocks and narrowed the search for productive and robust species combinations to maximize bioenergy productivity
- Gained field work experience by gathering samples (herbivores, detritivores, predators) to be analyzed for mercury and methylmercury by Oak Ridge employees in separate project

*“Synthesis of New Lanthanide Catalysts for Polymerization of Naturally Renewable Unsaturated Gamma Lactones into Cross-Linkable Biodegradable Polyesters”*

*Savannah State University: NSF-Peach State Louis Stokes Alliance for Minority Participation Program(PSLSAMP)*

*Mentor: Dr. Pascal Binda*

*Intern*

*May 2015 – July 2015*

- Worked to replace conventional polymeric materials with sustainable, environmentally friendly biodegradable polyesters
- Synthesized six new heteroleptic lanthanide complexes supported by new chiral [ONO] ancillary phenolate ligands with varying pendants using metals lanthanum and neodymium

### MENTORING EXPERIENCE

**Research Triangle Nanotechnology Network: Research Experience for Teachers**

*Supervisor: Dr. Ericka Ford & Maude Cuchiara*

*Research Mentor*

*June 2019 – July 2019*

- Gained project management experience by mentoring K-12 teachers on the fundamentals of electrospinning to manufacture functional nanofibers for advanced filtration

**North Carolina State University: Wilson College of Textiles**

*Supervisor: Dr. Melissa Pasquinelli*

*Teaching Assistant*

*January 2019 – May 2019*

- Worked as a teaching assistant for Introduction to Fiber Science course and also served as instructor on record for the laboratory section teaching the properties of fibers related to type and chemical structure with focus on fiber classification and identification

**North Carolina State University: TRIO Collegiate Programs**

*Supervisor: Mr. Kyle Blochl*

*Tutor*

*October 2018 – Present*

- Chemistry, physics, and mathematics tutor providing test preparation assistance for underrepresented college students in STEM disciplines