

CHRISTINE S. GRANT

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EDUCATION

BS	Mississippi State University, Biological Engineering Honors: magna cum laude	November 2020
AS	Manchester Community College, Engineering Science Honors: cum laude, Phi Theta Kappa, Epsilon Pi Tau	May 2018
BA	Emerson College, Writing, Literature, and Publishing Honors: magna cum laude	December 2012

RESEARCH EXPERIENCE

Connecticut Agricultural Experiment Station, Windsor, CT, USA	May 2021-August 2022
Position: Summer Research Assistant Principal Investigator: Dr. Richard Cowles and Dr. DeWei Li	
<ul style="list-style-type: none">• Investigated the bacterial inhibition of <i>Phytophthora</i> (water molds) on evergreen tree roots.• Studied the cultivation of the <i>Stropharia</i> genus of fungi in evergreen tree fields.	
Mississippi State University, Starkville, MS, USA	January 2019-February 2021
Position: Undergraduate Researcher Principal Investigator: Dr. Lauren B. Priddy	
<ul style="list-style-type: none">• Investigated hydrogels as a method for delivering antibiotics locally in the treatment of osteomyelitis. Work included poloxamer 407 in delivering vancomycin and testing a chitosan hydrogel to deliver fosfomycin.	
Center for Nanobiology and Structural Biology, Nové Hradky, CZ	summer 2018
Position: Student Researcher Principal Investigator: Dr. Rüdiger Etrich	
<ul style="list-style-type: none">• Worked with the Bruker D8 Venture x-ray diffractometer to develop a protocol for its use. Lysozyme was used as the model protein for exploring the best practices in using the diffractometer.• Assisted in cloning <i>E. coli</i> to overexpress the protein PAPSS2b for crystallization.	
Princeton University, Princeton, NJ, USA	summer 2017
Position: Student Researcher Principal Investigator: Dr. Mark Brynildsen	
<ul style="list-style-type: none">• Attempted to remove <i>lacZYA</i> and <i>lacI</i> then insert a Fluorescent Repressor Operator System consisting of <i>lacI-gfp-cam^R</i> in place of the native <i>lacI</i> and a <i>lacO</i> array inserted near the origin of the <i>Escherichia coli</i> chromosome.	

HONORS AND AWARDS

Mississippi State University Undergraduate Research Symposium	2020
Poster: Fabrication of Thermoresponsive Chitosan Gel as a Delivery Vehicle for Fosfomycin in the Treatment of Osteomyelitis Award: 1 st place in Biological Sciences and Engineering	
Mississippi State University Undergraduate Research Symposium	2019
Poster: Development of a Protocol to Characterize Autoclaved and Unautoclaved Poloxamer 407 as a Delivery Vehicle for Vancomycin Award: 2 nd place in Biological Sciences and Engineering	
Center for Nanobiology and Structural Biology Summer Research Symposium	2018
Presentation: Evaluation of the Bruker D8 Venture Diffractometer Using Lysozyme Crystals Award: Top 3 Presentations, unranked	
Epsilon Pi Tau	2018
Honor society for engineering students at 2-year colleges	
Phi Theta Kappa	2014
International honor society for students at 2-year colleges	

SCHOLARSHIPS

Mississippi Engineering Society Scholarship	2019
A scholarship awarded to engineering students in Mississippi by the Mississippi Engineering Society.	
Steve Boggan Annual Scholarship	2019
A scholarship awarded to one student in the Agricultural and Biological Engineering department at Mississippi State University.	
Phi Theta Kappa Scholarship	2018

A scholarship automatically awarded by Mississippi State University to transfer students who are verified members of Phi Theta Kappa International Honor Society.

Charles and Susan Plese Scholarship	2017
A merit scholarship awarded to students by the Manchester Community College Foundation.	
Frederick Lowe Scholarship	2017
A merit scholarship awarded to students by the Manchester Community College Foundation.	
Michael R. Wood Memorial Scholarship	2017
A merit scholarship awarded to students by the Manchester Community College Foundation.	
Sandler, O'Neill & Partners, L.P. 2016 EOFW Scholarship	2016
A merit scholarship awarded to students by the Manchester Community College Foundation.	

PRESENTATIONS AND POSTERS

Grant CS, Gautreaux MA, Roux K, Tucker L, Priddy LB. "Fabrication of Thermoresponsive Chitosan Gel as a Delivery Vehicle for Fosfomycin in the Treatment of Osteomyelitis"	2020
<i>Mississippi State University Undergraduate Research Symposium</i>	
Grant CS, Horstemeyer LK, Swanson E, Priddy LB. "Development of a Protocol to Characterize Autoclaved and Unautoclaved Poloxamer 407 as a Delivery Vehicle for Vancomycin"	2019
<i>Mississippi State University Undergraduate Research Symposium</i>	
Grant CS, Grinkevich P, Etrich R. "Evaluation of the Bruker D8 Venture Diffractometer Using Lysozyme Crystals"	2018
<i>Center for Nanobiology and Structural Biology Summer Research Symposium</i>	

PUBLICATIONS

Peer-Reviewed Journal Publications

Beard MC, Cobb LH, **Grant CS**, et al. Autoclaving of Poloxamer 407 hydrogel and its use as a drug delivery vehicle. *J Biomed Mater Res.* 2020;1–10. <https://doi.org/10.1002/jbm.b.34703>

Tucker LJ, **Grant CS**, Gautreaux MA, Amarasekara DL, Fitzkee NC, Janorkar AV, Varadarajan A, Kundu S, Priddy LB. Physicochemical and Antimicrobial Properties of Thermosensitive Chitosan Hydrogel Loaded with Fosfomycin. *Marine Drugs.* 2021; 19(3):144. <https://doi.org/10.3390/md19030144>

Literary Publications

Grant CS. Snow Waves. *Nota Bene: Phi Theta Kappa Honor Society Anthology.* 2015.

Grant CS. Sounds of Silence. *Nota Bene: Phi Theta Kappa Honor Society Anthology.* 2015.

PROFESSIONAL TRAINING AND CERTIFICATIONS

Computational Biology Certificate

Mississippi State University, Mississippi State, MS November 2020
Completed coursework additional to BS requirements, including classes for Python programming and capstone course Computational Biology.

Licensed Dairy Goat Judge

American Dairy Goat Association, Spindale, NC October 2014
Attended the pre-training conference and training conference to become a licensed judge for the American Dairy Goat Association (ADGA).

PROFESSIONAL AFFILIATIONS

National Society of Professional Engineers	2019-2020
Student chapter president at Mississippi State University	
American Dairy Goat Association	1998-present
Member of the Production Committee since 2019, licensed judge since 2014	

COMMUNITY SERVICE

Mississippi State University Veterinary School	2019-2020
I volunteered at the Laboratory Animal Resources and Care (LARAC) unit at Mississippi State University's veterinary school.	