

— congratulations —



TO OUR SPRING 2021  
UNDERGRADUATE RESEARCH  
SYMPOSIUM WINNERS!

## Arts and Humanities

**1st Place - Joseph Newell:** Dickinson, Displacement, and her use of Defense Mechanisms to Cope with Psychological Trauma (Mentors: Dr. Lara Dodds and Dr. Dhanashree Thorat, English)

**2nd Place - Lindsey Downs:** Loss, Reckless Behavior, and Jane Austen's Realism in *Sense and Sensibility* and *Persuasion* (Mentor: Dr. Kelly Marsh, English)

## Biological Sciences and Engineering

**1st Place - Reese Dunne:** Development and Implementation of a Magnesium-Based Finite Element Degradation Model for Orthopedic Implants (Mentor: Dr. Matthew Priddy, Mechanical Engineering)

**2nd Place - Hannah Scheaffer:** The Interference of PGD2 in the IL4 Anti-Inflammatory Pathway in THP1 Macrophages (Mentor: Dr. Matthew Ross, Comparative Biomedical Sciences, Center for Environmental Health Sciences, College of Veterinary Medicine)

**3rd Place - James Warren:** Bioprinting and evaluation of PLGA-KGN scaffolds as an augmentation to microfracture (Mentor: Dr. Steve Elder, Agricultural and Biological Engineering)

**3rd Place - Sarah Hobbs:** Characterization of Antifungal Activity of Strain A against aflatoxin producer *Aspergillus flavus* (Mentor: Dr. Shien Lu, Biochemistry, Molecular Biology, Entomology, and Plant Pathology)

**3rd Place - Anna Gamblin:** Annual Coastal Bird Community Response to Natural Vegetation Succession on Dredge-Spoil New Round Island (Mentor: Dr. Raymond Iglay, Wildlife, Fisheries, and Aquaculture)

## Physical Sciences and Engineering

**1st Place - Hailey Jamison:** Sorption of As(III) Using Fe<sub>3</sub>O<sub>4</sub> Nanoparticles Dispersed on *Guadua chacoensis* Bamboo (Si-char) and Its Redox Transformations (Mentor: Dr. Todd Mlsna, Chemistry)

**2nd Place - Nirmal Bhatt:** Thermo-Mechanical Modeling of Tubular Receivers for Solar Energy Storage (Mentor: Dr. Like Li, Mechanical Engineering)

**3rd Place - Grace Williams:** Determination of Mechanical Properties of Sandwich Composite Components (Mentors: Dr. Rani Sullivan and Mr. Robert Wolz, Aerospace Engineering)

**3rd Place - Nathan Frey:** Computational analysis of benzene-fused and extremely twisted pyrene-fused N-heterocyclic germynes and boranes (Mentor: Dr. Edwin Webster, Chemistry)

**3rd Place - James Dye:** Acoustic Levitator in Motion (Mentors: Dr. Zhenhua Tian and Dr. Jichul Kim, Aerospace Engineering)

## Social Sciences

**1st Place - Emily Davis:** Implementing Empathy in Future Healthcare Workers: Injury and Illness (I2) Simulation (Mentors: Dr. David Buys, Mrs. Ann Sansing, and Ms. Jasmine Harris-Speight, Food Science, Nutrition, and Health Promotion)

**2nd Place - Nicole Mejia:** Do You Care about Clutter?: Hoarding and Apathy (Mentor: Dr. Mary E Dozier, Psychology)

**3rd Place - Khirsten Wilson:** Bystanders to Bullying: Coping Mechanisms Involved in Challenging Hostile Workplace Dynamics (Mentor: Dr. H. Colleen Sinclair, Psychology)

**3rd Place - Maya McWilliams:** Exploring the Relationship between Food Insecurity and Asthma in Mississippi (Mentors: Dr. Bizu Gelaye and Dr. Mary M. Wesley, Epidemiology, Harvard T. H. Chan School of Public Health, Delta Scholars Program)

## Community Engagement Research Track

\*\*Sponsored by the Center for Community-Engaged Learning

**1st Place in Arts and Humanities - McKenzie Johnson:** Ethical and Empathetic Research in Architectural Education (Mentor: Alexis Gregory, School of Architecture)

**1st Place in Biological Sciences and Engineering - Cristina Griffith:** Precision Agriculture Technologies for Small Farmer Adoption (Mentors: Dr. Jeff Johnson and Dr. John Wes Lowe, Agricultural Economics and Agricultural & Biological Engineering)

**1st Place in Social Sciences - Kristin Williford:** Food Insecurity and Anxiety Among Mothers During COVID-19 (Mentor: Dr. Rahel Mathews, Food Science, Nutrition, and Health Promotion)

## Public Health Research Competition

\*\*Sponsored by the Department of Food Science, Nutrition and Health Promotion

**1st Place - Nicole Mejia:** Do You Care about Clutter?: Hoarding and Apathy (Mentor: Dr. Mary E Dozier, Psychology)

**2nd Place - Amy Pham:** The Relationship between Obesity and Sleep Quality in College Women (Mentors: Dr. Terezia Tolar-Peterson and Nicole Reeder, Food Science, Nutrition, and Health Promotion)

**3rd Place - Emily Davis:** Implementing Empathy in Future Healthcare Workers: Injury and Illness (I2) Simulation (Mentors: Dr. David Buys, Mrs. Ann Sansing, and Ms. Jasmine Harris-Speight, Food Science, Nutrition, and Health Promotion)

**3rd Place - Katie Evans:** Efficacy of Plant-Based Antimicrobial against Foodborne *Salmonella* spp. in Hummus Stored at Refrigerated and Abusive Temperatures (Mentor: Dr. Shecoya White, Food Science, Nutrition and Health Promotion)

## Theta Tau Tomorrow Builder Award

\*\*Sponsored by Theta Tau Professional Engineering Fraternity

**Shanika Musser:** Potential of biochar for the removal of waterborne microbial contaminants (Mentor: Dr. Benjamin Magbanua, Rula School of Civil and Environmental Engineering)



**MISSISSIPPI STATE UNIVERSITY™**  
JUDY AND BOBBY SHACKOULS  
HONORS COLLEGE