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2025 Undergraduate Research Awardees

Afternoon Presenters

Afternoon UG: Arts, Humanities, and Social Sciences AA

First Place

AN ANALYSIS OF ALKALINE-GLAZED STONEWARE DISTRIBUTION IN SOUTH CAROLINA: AN INSIGHT INTO 19TH CENTURY AFRICAN AMERICAN HISTORY AND THE LANDRUM-STORK KILN SITE IN COLUMBIA

Rachael Lanning, Anthropology (major) - Senior

Dr. Kelly Goldberg, Department of Anthropology

Second Place

Bridging Gaps: Strategic Outreach for Families Experiencing Homelessness Under the McKinney-Vento Act

Cassie Honeycutt, Mass Communications (major) - Senior

Prof. Dorlisa Damon, Center for Integrative and Experiential Learning

Afternoon UG: Arts, Humanities, and Social Sciences BB

First Place

Modern Maternity and The Digital Space

Zoe Stewart, Associate in Arts - Sophomore

Dr. Paige Wallace, Arts - Sumter

Second Place

Achilli v. Newman, British Attitudes Towards Anti-Catholicism and Sexual Violence in the Nineteenth Century

Henley Armon, History (major) - Senior

Dr. Carol Harrison, Department of History

Afternoon UG: Arts, Humanities, and Social Sciences CC

First Place

Ballots, Bench, and Bureaucracy: The Impact of Senatorial Elections and Partisanship on Judicial Decision Making, Post-Reconstruction to Progressive Era in the Regional South.

Merritt Foster, Political Science (major) - Senior

Dr. Chase Meyer, Department of Political Science

Second Place

Preserving the Narrative: Black Rap and Black Student Life during the Early Years of Integration at USC

Julio Domingo, Political Science (major) - Senior

Dr. Jill Found, Center for Civil Rights and Research

Afternoon UG: Biomedical Sciences AA

First Place

Sex-Specific Effects of Chronic Light Cycle Disruption in the Medial Amygdala during Adolescence

Janhvi Kartik, Biochemistry and Molecular Biology (major) - Senior

Dr. Alessandra Porcu, Department of Drug Discovery & Biomedical Sciences

Second Place

Effect of Early Life Exposure to Antibiotics and High Fat Diet on the Risk of Developing Early Onset Colorectal Cancer

Thrisha Mote, Biological Sciences (major) - Senior

Shyam Ganesh Babu, Biological Sciences (major) - Junior

Dr. Maria Pena, Department of Biological Sciences

Afternoon UG: Biomedical Sciences BB

First Place

Evaluating How Endocannabinoids Alter the Fecal and Ileal Microbiomes

Mary Archambault, Biological Sciences (major)

Dr. Melissa Ellermann, Department of Biological Sciences

Second Place

The Effect of HIV-Tat and TDP-43 on Stress Granule Dynamics and Pathology

Srestha Samaddar, Biological Sciences (major) - Senior

Dr. Michael Shtutman, Department of Drug Discovery & Biomedical Sciences

Afternoon UG: Biomedical Sciences CC

First Place

Long-term effects of gestational stress on postpartum cardiovascular health in female rats

Arshaam Kordamiri, Interdisciplinary Studies (major) - Sophomore

Dr. Fiona Hollis, Pharmacology, Physiology, and Neuroscience, USCSOM

Second Place (tie)

Brain-specific elevations of kynurenic acid reduce sleep duration in rats

Charles Grant, Neuroscience (major) - Senior

Dr. Ana Pocivavsek, Pharmacology, Physiology, and Neuroscience, USCSOM

Second Place (tie)

Leishmaniasis Research

Lindsey Baker, Biology (major) – Senior

Matheson Bray, Biology (major) - Sophomore

Dr. Edward D'Antonio, Department of Natural Sciences - Beaufort

Afternoon UG: Biomedical Sciences DD

First Place

Characterizing the functional role of tissue-specific amino acid transporter expression

J'nea Wiggins, Biomedical Engineering (major) - Junior

Dr. Alissa Armstrong, Department of Biological Sciences

Second Place (tie)

Effect of Antipsychotic Drugs on the Integrated Stress Response (ISR) as Possible Cause of Drug-induced Dystonia

Natalie Jackson, Neuroscience (major) - Junior

Dr. Rekha Patel, Department of Biological Sciences

Second Place (tie)

Differential Effects of Chronic Stress on Working Memory Performance and Locus Coeruleus Neurons in Aging Rats

Elise Quartaro, Neuroscience (major) - Junior

Dr. Joseph McQuail, Pharmacology, Physiology, and Neuroscience, USCSOM

Afternoon UG: Biomedical Sciences EE

First Place (tie)

Establishing a novel model of vicarious social stress-induced opioid preference in female rats

Taylor Childress, Neuroscience (major) - Junior

Dr. Susan Wood, Pharmacology, Physiology, and Neuroscience, USCSOM

First Place (tie)

Assessing the Probiotic Potential of Alistipes and Odoribacter Against Crohn's Disease

Thelma Zaw, Cardiovascular Technology (major) - Junior

Dr. Melissa Ellermann, School of Department of Biological Sciences

Second Place

Reverse Translation of Dual-Task Methods from Human Research to Rodents for Alzheimer's Disease and Aging

Audrey Mahoney, Neuroscience (major) – Junior

Leah Stone, Neuroscience (major) - Junior

Dr. Joseph McQuail, Pharmacology, Physiology, and Neuroscience, USCSOM

Afternoon UG: Biomedical Sciences FF

First Place

Neuropeptide S Receptor Antagonism Heightens Stress-Related Hypervigilance in Female Rats

Sarah Chugh, Biological Sciences (major) - Junior

Dr. Susan Wood, Pharmacology, Physiology, and Neuroscience, USCSOM

Second Place

Maintenance of Antibiotic Resistance Genes in the Gut Microbiome: A qPCR-based Approach for Detecting ARG-positive Escherichia coli

Hermella Demsie, Biological Sciences (major) - Sophomore

Dr. Melissa Ellermann, Department of Biological Sciences

Afternoon UG: Chemistry, Physics, and Math AA

First Place

Electrochemical Deposition of Silver Nanoparticles on Carbon Ultramicroelectrode Arrays

Natalie Strom, Neuroscience (major) - Senior

Dr. Olja Simoska, Department of Chemistry and Biochemistry

Second Place

Impact of purification conditions on grafting densities of magnetite nanocrystals in aqueous media

Camilla Morgan, Biochemistry and Molecular Biology (major) - Sophomore

Dr. Andrew Greytak, Department of Chemistry and Biochemistry

Afternoon UG: Chemistry, Physics, and Math BB

First Place

Expression and Purification of the S. Pombe Iron Repressor Fep1 for Structure/Function Analysis

Linden McGregor, Biochemistry and Molecular Biology (major) - Sophomore

Dr. Caryn Outten, Department of Chemistry and Biochemistry

Second Place

Kolmogorov-Arnold Networks for Explainable Molecular Property Prediction

Christian Geils, Biological Sciences (major) - Senior

Dr. Christopher Sutton, Department of Chemistry and Biochemistry

Afternoon UG: Engineering and Computing AA

First Place

Exploring the Effects of Nickel Nanoparticles formed by in situ Exsolution on the Thermoelectric Properties of Strontium Titanate based Thin Films

Benjamin Richardson, Mechanical Engineering (major) - Senior

Dr. Dongkyu Lee, Department of Mechanical Engineering

Second Place

Emotions and Equations: An EEG Exploration of Stress-Inducing Arithmetic

Amanda Sharpe, Biomedical Engineering (major) - Junior

Dr. Nicholas Boltin, Department of Biomedical Engineering

Afternoon UG: Engineering and Computing BB

First Place

The impact of retinoic acid drug delivery on macrophage phenotype in muscle recovering from atrophy.

Khufu Holly, Biomedical Engineering (major) - Sophomore

Dr. Michael Gower, Department of Biomedical Engineering

Second Place

Noncoherent OFMD using Asymmetric Binary Modulation on Conjugate-Reciprocal Zeros

Parker Huggins, Electrical Engineering (major) - Senior

Dr. Alphan Sahin, Department of Electrical Engineering

Afternoon UG: Engineering and Computing CC

First Place

Direct Seawater Electrolysis

Caroline Tiller, Chemical Engineering (major) - Sophomore
Dr. Sirivatch Shimpalee, Department of Chemical Engineering

Second Place

Controlled and Repeatable Impact Device for Tagged MRI 3D Acquisition

Peace Aina, Biomedical Engineering (major) - Junior
Prof. Ahmed Alshareef, Department of Biomedical Engineering

Afternoon UG: Environmental Sciences AA

First Place

The effects of male age and sexual maturity in *Drosophila melanogaster*

Sydney Wilson, Environmental Science (minor) - Senior
Dr. Brian Hollis, Department of Biological Sciences

Second Place

Assessing Color Vision Capabilities in the Atlantic Mud Crab *Panopeus Herbstii* Using Cardiac Response

Maryia Sikirzhytskaya, Biological Sciences (major) - Senior
Dr. Daniel Speiser, Department of Biological Sciences

Afternoon UG: Environmental Sciences BB

First Place

Insights into Plant Defense Mechanisms Through EMS Mutant Screening for GLV Perception

Carter Rhule, Biochemistry and Molecular Biology (major) - Senior
Dr. Johannes Stratmann, Department of Biological Sciences

Second Place

Phytoplankton group-specific and community responses to co-limiting nutrients in a managed reservoir: Lake Murray, South Carolina

Gavin Madgett, Marine Science (major) - Junior
Dr. Jay Pinckney, School of Earth, Ocean, and Environment

Afternoon UG: Environmental Sciences CC

First Place

Effects of Temperature on *Fundulus Heteroclitus* Egg Development

Madison Essex, Marine Science (major) - Senior
Dr. Jay Pinckney, School of Earth, Ocean, and Environment

Second Place

Developing Hyperactive mPing-based Tags for Targeted Insertion

Madison Hamlin, Biology (major) - Freshman
Dr. Nathan Hancock, Department of Biology and Geology - Aiken

Afternoon UG: Health Sciences AA

First Place

Investigating Methods to Accelerate Preventative Screening for Diabetes in High-Risk Rural Residents in South Carolina

Laura Witt, Public Health (major) - Senior

Dr. Melissa Nolan, Department of Epidemiology and Biostatistics

Second Place

Harnessing Regional Brain Age to Predict Aphasia Outcomes

Ansley Martin, Neuroscience (major) - Sophomore

Dr. Nicholas Riccardi, Department of Communication Sciences and Disorders

Afternoon UG: Health Sciences BB

First Place

Antibiotic Prescribing Trends by Provider Specialty and Drug Class Before and During the COVID-19 Pandemic (2013-2022)

Logan Moseley, Pharmaceutical Sciences (major) - Sophomore

Dr. Chao Cai, Department of Clinical Pharmacy & Outcomes Sciences

Second Place

“Experiences with Hospital Visits and Diabetes Management among Young Adults with Diabetes: A Mixed-Methods Analysis”

Matthew Pruitt, Cardiovascular Technology (major) - Junior

Dr. Angela Liese, Department of Epidemiology and Biostatistics

Afternoon UG: Health Sciences CC

First Place

The Effects of Mindful Walking on Quality of Life and Blood Pressure in African American Older Adults

Alina Tofiqul, Public Health (major) – Sophomore

Sarah White, Exercise Science (major) – Junior

Prof. Yang Chi-Hsiang, Department of Exercise Science

Second Place

Parental Awareness of Signs and Symptoms of Bipolar Disorder in Adolescence

Jordan Stovall, Nursing (major) - Senior

Dr. Mary Gaffney, Nursing - Aiken

Afternoon UG: Health Sciences DD

First Place

Investigating Undergraduate Self-Medicating Behaviors

Michael Ciolino, Nursing - Generic (major) - Junior

Dr. Karen Wickersham, School of Nursing

Second Place

The Role of Secondary Tick Vectors in the Evolution of Rickettsia parkeri in South Carolina

Kristina Baus, Public Health (major) - Senior

Dr. Melissa Nolan, Department of Epidemiology and Biostatistics

Afternoon UG: Health Sciences EE

First Place

Prevalence and Lived Experience of Mental Health Concerns in Diabetes Care

Kayla Davenport, Biological Sciences (major) - Junior

Dr. Angela Liese, Department of Epidemiology and Biostatistics

Second Place

Community Based Needs Assessment in Low-Resourced Older Adult Communities

Hannah Hardy, Public Health (major) - Senior

Dr. Cynthia Corbett, College of Nursing

Afternoon UG: Psychology and Neuroscience AA

First Place

Exploring the Relationship Between Joint Engagement and Child's Attention to Caregiver in Children with an Elevated Likelihood for Neurodevelopmental Disorders

Gwen Simons, Statistics (major) - Junior

Prisha Patel, Baccalaureus Artium et Scientiae (major) - Sophomore

Dr. Jessica Bradshaw, Department of Psychology

Second Place (tie)

Exploring the Relationship Between Stroke Risk and Premature White Matter Aging: A Novel Biomarker - ABC@USC

Connor Boyle, Neuroscience (major) - Sophomore

Dr. Roger Newman-Norlund, Department of Communication Sciences and Disorders

Second Place (tie)

Unraveling Social Responsiveness: A Comparison between SCN2A, SETBP1, and GRIN2B Pathogenetic Variants

Olivia Mace, Psychology (major) – Senior

Wae Man Chan, Neuroscience (major) - Sophomore

Dr. Caitlin Hudac, Department of Psychology

Afternoon UG: Psychology and Neuroscience BB

First Place

Cardiac Autonomic Measures of Frustration in Children with Autism Spectrum Disorder Compared to Siblings and Neurotypical Children

Eden Wellons, Neuroscience (major) - Senior

Dr. Jane Roberts, Department of Psychology

Second Place

Methods Comparison for Collecting Subjective Valence and Arousal Judgements

Esha Gandhi, Public Health (major) - Senior

Dr. Svetlana Shinkareva, Department of Psychology

Afternoon UG: Psychology and Neuroscience CC

First Place

Wired for Choice: How Dopamine Drives Decision-Making

Serena Parmar, Neuroscience (minor) - Senior
Dr. Peter Vento, Department of Psychology

Second Place

Fine Motor Dexterity as a Mediator of Age-Related Cognitive and Language Decline: The Role of Brain Age Gap

Haylee Robertson, Neuroscience (major) - Freshman
Dr. Roger Newman-Norlund, Department of Psychology

Afternoon UG: Psychology and Neuroscience DD

First Place (tie)

Outpatient Treatment Access for Adolescents with Opioid Use Disorder in South Carolina: Protocol for a Secret Shopper Study

Alyssa Nadeau, Psychology (major) - Junior
Dr. Sayward Harrison, Department of Psychology

First Place (tie)

From Triggers to Trends: Misophonia Severity and Its Psychological Associations

Sarah Hammons, Psychology (major) - Senior
Dr. Svetlana Shinkareva, Department of Psychology

Second Place

Speak Up or Stay Silent? How Gender and Abuse Type Shape College Students' Reactions to Intimate Partner Violence

Avery Kearse, Psychology (major) - Senior
Dr. Kenneth Barideaux, Department of Psychology – Upstate

Afternoon UG: Research AA

First Place (tie)

Through the Eyes of the Mistreated: Maternal Health Disparities Among Women

Zahmariya Littlejohn, Associate in Science - Freshman
Dr. Sarah Carter, Arts - Union

First Place (tie)

The impacts of climate change on the color of the oceans

kara pruit, Associate in Science - Freshman
Dr. Sarah Carter, Arts - Union

Second Place

Seeking Therapy; Addressing the Stigma

Mikiyah Worthy, Associate in Science - Freshman
Dr. Sarah Carter, Arts - Union

Afternoon UG: Research BB

First Place

Assembly and Comparative Analysis of Sabal palmetto Genomes

Sam Burns, Applied Mathematics (major) - Senior

Dr. Nathan Hancock, Department of Biology and Geology - Aiken

Second Place

Determining the Role of tbx5a and tbx5B in Development of Zebrafish

James Saxon, Biology (major) - Junior

Dr. April DeLaurier, Department of Biology and Geology - Aiken