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2025 Undergraduate Research Awardees

Morning Presentations

Morning UG: Arts, Humanities, and Social Sciences A

First Place

Everyone Dies: The relationship between the enslaved, master, and death in an Antebellum era slave cemetery

Julia Shough, Anthropology (major) - Junior

Prof. Terrance Weik, Department of Anthropology

Second Place

"Manuscript Minutes:" Demystifying Medieval Manuscript Fragmentology through Video

Kaylen Pritchard, English (major) - Junior

Courtney Tsakanikas, English (major) - Senior

Prof. Scott Gwara, Department of English Language and Literature

Morning UG: Arts, Humanities, and Social Sciences B

First Place

Digging Through the Past: Using Archaeological Resources to Investigate the History of Enslavement at USC

Emmie Coler, Political Science (major) - Sophomore

Dr. Kelly Goldberg, Department of Anthropology

Second Place

The Impact of Race in Strickland Claims (ineffectiveness assistance) in Death Penalty Cases in Florida

Landon Watson, Philosophy (major) - Junior

Dr. John Burrow, Department of Criminology and Criminal Justice

Morning UG: Biomedical Sciences A

First Place

Sleep Quality Across Adolescence in Rats

Sam Walther, Neuroscience (major) - Senior

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

Second Place

CDK8/19-Targeting PROTACs Prevent Resistance and Enhance Long-Term Treatment Efficacy in AML

Rebekah Martin, Biomedical Engineering (major) - Sophomore

Dr. Mengqian Chen, Department of Drug Discovery & Biomedical Sciences

Morning UG: Biomedical Sciences B

First Place

Hypertension-Induced Alterations in the Retinal Microvasculature: Immunofluorescent Analysis of Pericyte Coverage and Vascular Architecture in Hypertensive Mice

Rohit Nampoothiry, Baccalaureus Artium et Scientiae (major) - Junior

Dr. Cameron McCarthy, Cell Biology and Anatomy, USCSOM

Second Place

The Effects of Acute Restraint Stress and M4 PAM Treatment on Stereotyped Behaviors

Margo Wheeler, Neuroscience (major) - Senior

Dr. Dan Foster, Pharmacology, Physiology, and Neuroscience, USCSOM

Morning UG: Biomedical Sciences C

First Place

Focal Adhesions and Cellular Morphology in Down Syndrome Fibroblasts

Mitesh Patel, Neuroscience (major) - Senior

Dr. Kristy Welshhans, Department of Biological Sciences

Second Place

Investigating the Effect of Dimethyl Fumarate on Neurofilament Integrity

Nicholas Dolan, Neuroscience (major) - Senior

Dr. Norma Frizzell, Pharmacology, Physiology, and Neuroscience, USCSOM

Morning UG: Biomedical Sciences D

First Place

Effects of gestational stress on postpartum hippocampal mitochondrial protein expression

Hannah Brennen, Public Health (major) - Junior

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

Second Place

Analysis of BAI Receptor Expression in the Developing Visual System in Vivo

Tremayne Ansani, Neuroscience (major) - Senior

Prof. Fabienne Poulain, Department of Biological Sciences

Morning UG: Chemistry, Physics, and Math A

First Place

The Impact of Carbon Sources on Phenazine-Mediated EET in Pseudomonas Aeruginosa

Reese Lycan, Biochemistry and Molecular Biology (major) - Senior

Dr. Olja Simoska, Department of Chemistry and Biochemistry

Second Place

Mechanistic Insights on Hydride Formation via Nickel(II) Salen Electrocatalyst

Christopher LeBarron, Environmental Science (major) - Senior

Dr. Seyyedamirhossein Hosseini, Department of Chemistry and Biochemistry

Morning UG: Chemistry, Physics, and Math B

First Place

Suzuki Cross-Coupling Reaction Conditions Optimized for a New Class of Hybrid Catalysts

Alexia Bradbury, Biochemistry and Molecular Biology (major) - Sophomore

Dr. Aaron Vannucci, Department of Chemistry and Biochemistry

Second Place

Tunable Photoisomerization Kinetics in Photochromic Metal-Organic Frameworks

Esther Adelson, Mathematic (major) – Senior

Virgina Arnold, Biochemistry and Molecular Biology (major) Senior

Prof. Natalia Shustova, Department of Chemistry and Biochemistry

Morning UG: Chemistry, Physics, and Math C

First Place

Alternative Sources of DBP Formation: Examining DBP Formation Potential of Pressure Washing

Carlynn Rychener, Biochemistry and Molecular Biology (major) - Sophomore

Hannah Keen, Chemistry (major) - Sophomore

Dr. Susan Richardson, Department of Chemistry and Biochemistry

Second Place

Electrochemical monitoring of antimicrobial impacts on virulence factor production dynamics in *Pseudomonas aeruginosa*

Sophia Woytowitz, Biochemistry and Molecular Biology (major) - Sophomore

Dr. Olja Simoska, Department of Chemistry and Biochemistry

Morning UG: Engineering and Computing A

First Place

Floasis - Redesigning Menstrual Cups

Andrew Urzillo, Biomedical Engineering (major) - Senior

Leighton Buckner, Biomedical Engineering (major) - Senior

Mrs. Gina Spence, Center for Integrative and Experiential Learning

Second Place

Design and Analysis of a Selective Osmosis Driven Seawater Electrolyzer for Sustainable Hydrogen Production

Rachel Wayne, Chemical Engineering (major) - Sophomore

Dr. William Mustain, Department of Chemical Engineering

Morning UG: Engineering and Computing B

First Place

Heart Rate Variability Integration with Advanced 3D Modeling

Miller Cox, Biomedical Engineering (major) - Senior

Dr. Nicholas Boltin, Department of Biomedical Engineering

Second Place

Effects of Tiered Noise Reduction Techniques on Contour Detection

Dallas Wade, Computer Science (major) - Sophomore

Dr. Christian O'Reilly, Department of Computer Science and Engineering

Morning UG: Environmental Sciences A

First Place

A Multi Proxy Perspective on Abrupt Climate Change in the Tropics during Early MIS 3 from the Cariaco Basin

Anthony Anderson, Environmental Earth Systems (major) - Senior

Dr. Kelly Gibson, Department of Biology and and Geology - Aiken

Second Place

Effects of salinity and temperature on the life history of the cannonball jellyfish, *Stomolophus meleagris*

Levi Wagner, Environmental Studies (major) - Junior

Dr. Joshua Stone, Department of Biological Sciences

Morning UG: Environmental Sciences B

First Place

Which moths are ear-resistible? Exploring the distribution & dynamics of *Dicrocheles* ear mites in noctuid moths

Allison Fletcher, Biochemistry and Molecular Biology (major) - Senior

Dr. Eric LoPresti, Department of Biological Sciences

Second Place

Testing the bioactivity of GLV-derivatives for localization of GLV receptors in *Arabidopsis* cells

Fallon Tomlin, Mathematic (major) - Senior

Dr. Johannes Stratmann, Department of Biological Sciences

Morning UG: Environmental Sciences C

First Place

The Estuarine Soundscape Observatory Network in the Southeast (ESONS): Does Climate Variability and Noise Pollution Affect Fish Chorus in Estuaries of South Carolina?

Garrett Willford, Biology (major) - Senior

Dr. Eric Montie, Department of Natural Sciences - Beaufort

Second Place (tie)

Insulin-like Peptide (ILP) Expression in *Stomoxys calcitrans*

Haily Pineda, Biology (major) - Senior

Dr. Mary Mills, Department of Biology and Geology - Aiken

Second Place (tie)

Automated Yeast Colony Detection and Classification Using Machine Learning

Cayden Scruggs, computer Science (major) – Senior

Dr. Tad Dallas, Department of Biological Sciences

Morning UG: Health Sciences A

First Place

Using an Adaptive Rower for People Using Power Wheelchairs to Improve Cardiovascular Fitness

Collin Cochcroft, Exercise Science (major) - Senior

Dr. Elizabeth Regan, Department of Exercise Science

Second Place

Birth in Black: Examining the Relationship Between Mode of Delivery and its Influence on Breastfeeding Success in Black Women

Ebony Christie, Public Health (major) - Senior

Dr. Curisa Tucker, College of Nursing

Morning UG: Health Sciences B

First Place

Examining Racial Disparities in Cancer Incidence and Mortality across South Carolina Regions

Will Stokes, Baccalaureus Artium et Scientiae (major) - Junior

Dr. Swann Arp Adams, Department of Epidemiology and Biostatistics

Second Place

Disambiguating Semantic Processing and Executive Function in Post-Stroke Aphasia

Ryan Dixon, Neuroscience (major) - Senior

Dr. William Matchin, Department of Communication Sciences and Disorders

Morning UG: Health Sciences C

First Place

Associations Among Moderate to Vigorous Physical Activity, Handgrip Strength, and Fat Free Mass Index

Kennedy Bumbrey, Associate in Science - Sophomore

Dr. Elizabeth Easley, Science - Lancaster

Second Place

Examining the Relationship Between Physical Activity and Upper Respiratory Infections in University of South Carolina Undergraduate Students: A Longitudinal Study

Amanda Blanton, Nursing - RN (major) - Junior

Maura Hamilton, Nursing - RN (major) - Junior

Dr. Kristen Weaver-Toedtman, College of Nursing

Morning UG: Health Sciences D

First Place

Sociodemographic Variations in Perinatal Telehealth Uptake, Prenatal Care Access, and Care Continuity in the United States

Leah Wood, Statistics (major) - Junior

Dr. Peiyin Hung, Department of Health Services Policy and Management

Second Place

Core Temperature and Influencing Factors Among Historically Black College and University Marching Band Artists

Spencer Barnwell, Baccalaureus Artium et Scientiae (major) - Junior

Dr. Dawn Emerson, Department of Exercise Science

Morning UG: Health Sciences E

First Place

Associations of Sedentary Activity Types on Cognition in Older African American Adults

Chathurvedi Ganguru, Neuroscience (major) - Junior

Dr. Chih-Hsiang Yang, Department of Exercise Science

Second Place

PATIENT AND EVENT CHARACTERISTICS IN LEGAL CASES OF ATHLETE SUDDEN DEATH AND THEIR RELATION TO EMS ACTIVATION

Jacob Chozick, Baccalaureus Artium et Scientiae (major) - Junior

Dr. Susan Yeargin, Department of Exercise Science

Morning UG: Health Sciences F

First Place

Narrative Skills of Women with the FMR1 Premutation

Emma Hutz, Public Health (major) - Senior

Dr. Jessica Klusek, Department of Communication Sciences and Disorders

Second Place (tie)

Examination of Energy Availability and Sleep Quality Among Physically Active ROTC Females

Kylie Pham, Public Health (major) - Senior

Dr. Toni Torres-McGehee, Department of Exercise Science

Second Place (tie)

Investigating Social Desirability Bias of English in Spanish-English Bilingual Kindergarten Students

Elianna Navarro, Neuroscience (major) - Freshman

Diana Guzman, Public Health (major) – Junior

Dr. Lisa Fitton, Department of Communication Sciences and Disorders

Morning UG: Psychology and Neuroscience A

First Place

Do Women Need More Sleep Than Men? A Study on Gender Differences in College Student Sleep and Mental Health

Joshua Hughes, Neuroscience (major) - Senior

Dr. Alexandria Reynolds, Department of Psychology

Second Place

The A-Eye Study: Utilizing AI to derive OCTA parameters from OCT imaging

Ava Stienes, Neuroscience (major) - Sophomore

Dr. Roger Newman-Norlund, Department of Psychology

Morning UG: Psychology and Neuroscience B

First Place

Association of Early Communication and Later Anxiety in Children with an FMR1 Gene Mutation.

Avery Phelps, Neuroscience (major) - Senior

Dr. Jane Roberts, Department of Psychology

Second Place

A Behavioral Coding System for Orofacial Movements in Response to Auditory, Visual, and Mental Imagery Stimuli in Misophonia

Ashley Anderson, Psychology (major) - Junior

Rachel Sellers, Neuroscience (major) - Sophomore

Dr. Svetlana V. Shinkareva, Department of Psychology

Morning UG: Psychology and Neuroscience C

First Place

The Effect of an Acute Mindfulness Session on Emotion Regulation and Theta Power in Parents

Casey Vojcek, Psychology (major) - Senior

Lucille Brazzell, Psychology (major) - Senior

Dr. Laura Jelson-Swain, Department of Psychology - Aiken

Second Place

Relationship Between Heart Rate Variability and ADHD Symptoms in Children with Fragile X Syndrome

Alexis Rude, Biological Sciences (major) - Senior

Dr. Jane Roberts, Department of Psychology

Morning UG: Psychology and Neuroscience D

First Place

Romantic and Intimate Skills Knowledge: Understanding the Impact of Early Sexual Content Exposure on Young Adults

Emma Owens, Psychology (major) - Senior

Dr. Suzanne Swan, Department of Women's and Gender Studies

Second Place

Personality and The Social Contagion Effect: How Memory is Influenced by Agreeableness

Fiona Kessler, Psychology (major) - Senior

Dr. Susan Ruppel, Department of Psychology - Upstate

Morning UG: Psychology and Neuroscience E

First Place

Do Not Ask To Touch My Hair: The Rooted and Resilience Project Investigating and Illuminating Hair Discrimination Utilizing Various Recruitment Strategies for Black Males

Erin Marion, Political Science (major) - Senior

Dr. Pamela Martin, Department of Psychology

Second Place

Exploring whether individuals who identify as sexual and/or gender minorities and have elevated ADHD symptoms report more adverse childhood experiences

Angel Rivera, Psychology (major) - Senior

Dr. Kate Flory, Department of Psychology