



# SCHOLAR SHOWCASE

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## UNIVERSITY OF SOUTH CAROLINA AIKEN

**11 April 2025**

### **Schedule of Events**

#### **Poster Sessions – Student Activity Center Gym**

**Poster Hanging - 9:00 am - 10:00 am**

**Session 1 - 10:00 am - 11:30 am**

**Poster Hanging - 1:00 pm - 2:00 pm**

**Session 2 – 2:00 pm – 3:30 pm**

#### **Humanities Oral Sessions – SAC Mezzanine**

**Session 1 – 10:00 am**

**Session 2 – 2:00 pm**

#### **Honors Symposium Session – SAC Mezzanine**

**Session 1 - 3:15 pm**

## **Humanities Oral Sessions – SAC Mezzanine**

### **Session 1 – 10:00 am – 11:20 am**

**10:00-10:20 The Corporate Mirage: Barriers to Mobility in the United States**

Benjamin Weeks mentored by Dr. Christine Wernet

**10:20-10:40 Police Reform: An Analysis of Considerations Unique to Rural Areas**

Bea Waddell mentored by Dr. Amanda Warren-Seeger

**10:40-11:00 "'You Can't Be Both'": Identity and Doppelgangers in Tana French's *The Likeness***

Rachel Eubanks mentored by Dr. Matt Miller

### **Session 2 – 2:00 pm – 2:40 pm**

**2:00-2:20 A Concept of Conscious Suffering: Existentialist Representation in Dazai's *No Longer Human***

Kylie Haynes mentored by Dr. Matt Miller

**2:20-2:40 The Gregg-Graniteville Archives: Community, History, and Preservation**

Addisen Alvanos mentored by Dr. Alexia Helsley

## **Honors Symposium Session – SAC Mezzanine**

**3:15 pm – 5:00 pm**

**3:15-3:30      Comparison of the Cost and Health Impact of Following the Mediterranean, Paleo, Vegan, and Traditional Western Diets.**

Natalie Boswell mentored by Brian Parr

**3:30-3:45      Deficits in Sexual Health Testing in Aiken County, SC**

Cherly Harrison mentored by Sonya Edwards

**3:45-4:00      Examination of In-Group Bias for Sex in Pain Empathy**

Kristen Carroll mentored by Laura Swain

**4:00-4:15      Determining phenotypes associated with loss of function of rcor2 in developing zebrafish**

Nazeerah Rahman mentored by April DeLaurier

**4:15-4:30      Enhancing Marketing Strategies for University Housing at USC Aiken**

Curtis Thompson mentored by John Engel

**4:30-4:45      Parental Awareness of Signs and Symptoms of Bipolar Disorder in Adolescence**

Jordan Stovall mentored by Mary Gaffney

**4:45-5:00      Musical Notation in the 21<sup>st</sup> Century: Expanding the Communication of Music through Technology**

Leyton Hewitt mentored by Alan Avant

## **Morning Poster Session – Student Activity Center Gym**

### **Poster 1 - Analyzing the Impacts of Schizophrenia for Students**

Anna Davis mentored by Melissa Martin

### **Poster 2 - What is a LIFE Program?**

Kennedy Melton, Angus Macaulay, Mayeli Andrade Velasquez, Juliana Gray and Ava Shahbahrani mentored by Carol Dunlap

### **Poster 3 - Examining Anxiety in K-12 Schools**

Madison Nosal mentored by Melissa Martin

### **Poster 4 - Impact of ODD in K-12 Schools**

Nyckele Gardner mentored by Melissa Martin

### **Poster 5 - Does Poverty Affect Kids in School?**

Chloe Grigsby mentored by Judith Collazo

### **Poster 6 - Nervous Conditions: Shifting Thought**

Addisen Alvanos mentored by Addisen Alvanos

### **Poster 7 - Cloning of a HIV-1 Rev Expression Plasmid**

Gillian Gregory mentored by William Jackson

### **Poster 8 - Analyzing Expression of Pro-apoptotic BimL from a HIV-based Inducible Plasmid**

Holly Taylor mentored by William Jackson

### **Poster 9 - Insulin-like Peptide (ILP) Expression in *Stomoxys calcitrans***

Haily Pineda mentored by Mary Mills

### **Poster 10 - Addition of a Nuclear Localization Signal to *OsMar14* Transposase to Increase *Stowaway 14T32* Transposition**

Jennifer Gonzalez mentored by Nathan Hancock

### **Poster 11 - Cloning Pro-Apoptotic Bak into the Inducible Plasmid p(LIR)x.pA**

Marissa Brooks mentored by William Jackson

### **Poster 12 - Cloning PUMA into the Inducible Plasmid p(LIR)x.pA**

Sydney Stephens mentored by William Jackson

### **Poster 13 - Determining the Impact of Blood Meal Size on Egg Development in *Stomoxys calcitrans***

Isabella Cardenas mentored by Mary Mills

### **Poster 14 - Developing an *Arabidopsis thaliana* Transposition Assay for *Zmar20***

Brenden Bogar mentored by Nathan Hancock

**Poster 15 - Cloning the HIV-1 p17 Inhibitory Region into a HIV-based Inducible Plasmid**

Gracie Goss mentored by William Jackson

**Poster 16 - The Effects of Strength Training on Collegiate Athletes**

Bailey Kirkland mentored by Andrew Hatchett

**Poster 17 - Determining the Prevalence of the Female Athlete Triad Among Female Collegiate Athletes**

Haley Bootle mentored by Andrew Hatchett

**Poster 18 - How Do Symptoms Associated with Anxiety Affect One's Performance During Weightlifting Competition, Compared to Isolated Training Performance**

Nicholas Thompson mentored by Andrew Hatchett

**Poster 19 - Effects of Exercise on Depressive Symptoms in Intellectually Disabled Individuals**

Mary Strauss mentored by Andrew Hatchett

**Poster 20 - How an Athlete's Coping Skills from an Injury Affect Recovery and Performance Post-recovery**

Anarria Hamlett and Savannah Bilton mentored by Andrew Hatchett

**Poster 21 - Deaths of Despair: Exploring Suicide and Alcohol Related Deaths During the Great Depression in Charleston, SC**

Austin Beatty mentored by Andrew Dyer

**Poster 22 - The Cost of Progress: How Modern Healthcare Left Some Behind**

Angelica Rodriguez mentored by Andrew Dyer

**Poster 23 - Women vs. Women: Death in Detail**

Aliyah Williams mentored by Andrew Dyer

**Poster 24 - Death or Debt: The Effects of Medicare and Medicaid in Aiken During the 1950s, 60s, and 70s**

Brayden Pender mentored by Andrew Dyer

**Poster 25 - Unnatural Causes: Are People Over 50 More Likely to Have an Ambiguous Cause of Death**

Brett Boyd mentored by Andrew Dyer

**Poster 26 - USC Aiken Bluebird Trail 2025 Update**

Emory Owens, Quinn Schreiber, Percy Riggins and Anna Buck mentored by Michelle Vieyra

**Poster 27 - Fecal Pollution in Calico Creek in Aiken, SC**

Jasmine Kitchings mentored by Michele Harmon

**Poster 28 - Economic Status and Maternal Mortality in Rural vs Urban Areas**

Kimesha Williams mentored by Andrew Dyer

**Poster 29 - Trauma Over Time**

Robert Tice mentored by Andrew Dyer

**Poster 30 - The Forbidden Flu: Comparing Spanish Influenza Deaths Between Aiken and Greenville**

Ren Lucas mentored by Andrew Dyer

**Poster 31 - Advanced Conveyor Decontamination**

Alina Tomko, Logan Crowder and Yaraxy Martinez mentored by Bethany Fralick

**Poster 32 - Root-cause Analysis and Security Awareness in Higher Education Institutions**

Brei Crowell, Joel Gilmore and Beckeyia Sweeper mentored by Hala Strohmier

**Poster 33 - Sump Clean Out Tool**

Caleb Randolph, Ethan Youmans and Donavyn Simpkins mentored by Bethany Fralick

**Poster 34 - Savannah River Nuclear Solutions Self-Extinguishing Trashcan Study**

Darla Alarcon, Turner Peeples and Connor Givens mentored by Bethany Fralick

**Poster 35 - Building InterestLink Mobile App**

Joshua Sharp, Ashlyn White, Joshua Rogers and Lance Carson mentored by Hala Strohmier

**Poster 36 - SRMC Lag Storage Mini-Wrench**

Broderic LeDonne, Garry Schneider and Parker Howell mentored by Bethany Fralick

**Poster 37 - Event Data Collection and Analysis**

Haley Mallett, Benjamin Wisham, Ty Bartholomew and Kohl Kennedy mentored by Chris Clark

**Poster 38 - Retrofitting a Fixed Satellite Dish into a Remotely Controlled Radio Telescope: A Multidisciplinary Approach to Sustainable Astronomical Observation**

Molly Lindsey and Connor McPherson mentored by Bethany Fralick

**Poster 39 - Savannah River National Lab Centrifugal Contactor Cart Design**

Othello Cooper, Auston Wright and Brandon Caldwell mentored by Bethany Fralick

**Poster 40 - Dip Tank Agitation System**

Patrick Madura and Truman Brabham mentored by Bethany Fralick

**Poster 41 - A Comprehensive Comparative Analysis of RFID Devices Security in Supply Chain Geofencing Technologies**

Brecken Merrill, Mary Woolington and Shamreen Shakil Shaikh mentored by Hala Strohmier-Berry

**Poster 42 - Determining the Role of *Tbx5a* and *Tbx5b* in Development of Zebrafish**

James Saxon mentored by April DeLaurier

**Poster 43 - Determining the Role of *phf21aa* and *phf21ab* in a Model for Potocki-Shaffer Syndrome in Zebrafish**

Day'Lyn McKinnis mentored by April DeLaurier

**Poster 44 - Differentiating the Effect of Acetaminophen on Cognitive and Affective Pain Empathy**

Tyler Robbins mentored by Laura Swain

**Poster 45 - Identification of *desmocollin (dsc)* Mutant Zebrafish**

Adam Langworthy mentored by April DeLaurier

## **Afternoon Poster Session – Student Activity Center Gym**

### **Poster 1 - Verse Novels in the Classroom: Promoting Poetry Across Content Areas**

Isaiah Gillian, Antwone Williams and Landon Corley mentored by Michelle Rasheed

### **Poster 2 - Analyzing the Impacts of Disruptive Mood Dysregulation Disorder for Students**

Bridgett Krol mentored by Melissa Martin

### **Poster 3 - Analyzing the Impacts of Disruptive Mood Dysregulation Disorder for Students**

Bridgett Krol mentored by Melissa Martin

### **Poster 4 - Examining ADHD in K-12 Students**

Emma Allen mentored by Melissa Martin

### **Poster 5 - Higher Need and Higher Demand**

Madison Burckhalter mentored by Judith Collazo

### **Poster 6 - Vietnam Veterans Oral History Project: Wartime Expectations, Realities, and Reflections**

Luke Aldridge mentored by Sarah King

### **Poster 7 - Feelings You Don't See: The Influence of Subliminal Emotion on Symbol Perception**

Corbin Barrett mentored by Alexandra Roach

### **Poster 8 - Transposition of Maize and Soybean CACTA Elements in Arabidopsis**

Axel Hornung mentored by Nathan Hancock

### **Poster 9 - Insertion of HIV-1 Inhibitory Sequence INS1 into the HIV Inducible Plasmid p(LIR)X.pA**

Ethan Nesbitt mentored by William Jackson

### **Poster 10 - Cloning the HIV-1 p17 Inhibitory Region into the Inducible Plasmid, p(LIR)x.pA**

Hayden Driver mentored by William Jackson

### **Poster 11 - Evaluating the Use of PUMA to Induce Cell Death for Use in Anti-HIV Gene Therapy**

Jadynn McMahon mentored by William Jackson

### **Poster 12 - Genetic Analysis of the Dwarf Soybean Mutant**

James Burns mentored by Nathan Hancock

### **Poster 13 - Developing Hyperactive *mPing*-based Tags for Targeted Insertion**

Madison Hamlin mentored by Nathan Hancock

**Poster 14 - Assembly and Comparative Analysis of *Sabal palmetto* Genomes**

Sam Burns mentored by Nathan Hancock

**Poster 15 - The Association Between Body Composition, Dietary Habits and Their Influence on Anxiety and Depression in College Students**

Katherine Sojo mentored by Andrew Hatchett

**Poster 16 - The Effects of Exercise on Reducing Stress Levels in Female College Students**

Madelyn Smith mentored by Andrew Hatchett

**Poster 17 - Interventions to Reduce the Incidence of *C. difficile* Infections**

Alexa Carnahan, Hannah Cutshall and Kaitlyn Anderson mentored by L. Tyler Shealy

**Poster 18 - Rapid Response Team Efficacy in Reduction of ICU Transfers**

Chaney Heath, Stephanie Decker, Caitlyn Courtney and Bryce Penny mentored by L. Tyler Shealy

**Poster 19 - Reducing Heart Failure Readmission Rates**

Haley Crossland, William Summers and Rosalynn Knight mentored by L. Tyler Shealy

**Poster 20 - An Observation of the Impact of Stretched-range Overcoming Isometric Training on Neuromuscular and Musculoskeletal Adaptations**

Dalton Sanders mentored by Andrew Hatchett

**Poster 21 - Detecting Major Depressive Disorder in Adolescents, Young Adults, and Victims of Intimate Partner Violence**

Josie Harting, Carter Beaty and Savannah Ballentine mentored by L. Tyler Shealy

**Poster 22 - Reducing the Incidence of *Candida auris***

Dashay Howard, Alexis Neumar and Jewelene Richardson mentored by L. Tyler Shealy

**Poster 23 - Reducing Surgical Site Infections in Pediatrics**

Taylor Ingraham, Charles Miskelly and Carsen Lacombe mentored by L. Tyler Shealy

**Poster 24 - Reducing the Incidence of *Candida auris***

Jewelene Richardson, DaShay Howard and Alexis Neumar mentored by L. Tyler Shealy

**Poster 25 - Determining the Relationship Between Strength Training and Athletic Performance in Female Collegiate Soccer Players**

Lorna Mathias mentored by Andrew Hatchett

**Poster 26 - Improving Smoking Prevention and Cessation Among Adolescents**

Mallory Rich, Emily Pearson and Elizabeth Flynn mentored by L. Tyler Shealy

**Poster 27 - Ditch the Prick! Continuous Glucose Monitoring vs. Point of Care  
Fingersticks in the Inpatient Population**

McKenzie Love, Belise Tegang, Wesley Knapp and Adrianna Adair mentored by L. Tyler Shealy

**Poster 28 - Evaluation of Different Alcohol Withdrawal Scales**

Slater Simpson, Anna Rose Hernandez and Jasmine Bryant mentored by L. Tyler Shealy

**Poster 29 - The Impact of Breastfeeding on Infant and Maternal Health**

Sydney Yongue, Taniya Toole and Sarah Johnson mentored by L. Tyler Shealy

**Poster 30 - Cybersecurity Gaming App for Children**

Isaac Vaughn and Nathaniel Gray mentored by Hala Strohmier

**Poster 31 - Intrusion Detection and Prevention System Using Artificial  
Intelligence/Machine Learning**

Izan Ruiz Hernandez and Benjamin Coghill mentored by Hala Strohmier

**Poster 32 - Exploring Math Education Issues in South Carolina**

James Fleece, Sabbaak Waraich and Tara McGee mentored by Hala Strohmier

**Poster 33 - Guided Exploration of Machine Learning: Multi-Model Training and  
Evaluation in Google Colab**

Jacob Horn mentored by Ahmed Eltoukhy

**Poster 34 - Key Factors in Building a Scalable, User-Centric Event-Based Social  
Media Platform**

Keenan Golston, Julian Ward, Jadon Ott and Autumn Hurley mentored by Hala Strohmier

**Poster 35 - Red Team Project - Malware Development**

Nicholas Maroney, Jonathan Galbraith and Bryce Sullivan mentored by Chris Clark

**Poster 36 - The Effects of Mixing Time on the Thermal Conductance and Viscosity  
of Ionic Fluid-Based Nanofluids**

Othello Cooper and Jacob Phillips mentored by Titan Paul

**Poster 37 - Research and Development of Machine Learning Models with Medical  
Data**

Richy Modugu mentored by Hala Strohmier

**Poster 38 - An Algorithm for the Constrained Longest Common Substring Problem**

Richy Modugu mentored by Rao Li

**Poster 39 - Prediction of Thermal Conductivity of Ionic Liquids-Based Nanofluids  
(NEILs) using Machine Learning (ML)**

Truman Brabham and Turner Peeples mentored by Titan Paul

**Poster 40 - Team 7 Project 7 - Veterinarian Web Application**

Andrew Nguyen, Fernando Gomez and Jamel Addahoumi mentored by Hala Strohmier

**Scholar Showcase Organizing Committee:**

Dr. Bill Jackson  
Dr. C. Nathan Hancock  
Dr. Jeremy Culler  
Dr. Michele Harmon  
Dr. Matthew Miller  
Dr. Michelle Vieyra

**Technical Assistance**

Prof. Brad Reinhart

**Center for Research Excellence**

**USCA Office of Academic Affairs**