

COLLEGE of CHARLESTON

UNDERGRADUATE RESEARCH AND CREATIVE ACTIVITIES

2009 SURF AWARD RECIPIENTS

The office of Undergraduate Research and Creative Activities is pleased to announce the 2009 SURF Grant Award Recipients. Please join us in congratulating these students and their mentors.

Student: Madelyne Adams

Mentor: Briget Doyle

Title: The Impacts of Coastal Erosion on Deveaux Bank as a Barrier Island and Endangered Wildlife Habitat

Major: Environmental Geology

Department: Geology and Environmental Geosciences

Student: Grace Aghapour

Mentor: John Hull

Title: Painting and Americana

Major: Studio Art

Department: Studio Art

Student: Elizabeth Ahern

Mentor: Christine Byrum

Title: Isolation and Characterization of Muscle Markers in Embryos of the Sea Urchin *Lytechinus variegatus*

Major: Biology

Department: Biology

Student: Katheryn Allenby

Mentor: Jennifer Wright

Title: Perception of Social Status Differences between Adolescents With and Without Disabilities and Its Influence on Moral Judgments

Major: Psychology

Department: Psychology

Student: Brittany Bayley

Mentor: Ann Oprisan

Title: Direct Imaging of Critical Fluctuations in Pure Fluids and Binary Mixture

Major: Physics & Astronomy

Department: Physics & Astronomy

Student: Alicia Bonanno

Mentor: Mark Hurd

Title: Central Cortical Networks and Audition

Major: Biochemistry (Neuroscience minor)

Department: Psychology

Student: Katie Brierely

Mentor: Adam Doughty

Title: Experimental Procedures for Uncovering Rich-to-Lean Effects in Normal Human Behavior

Major: Psychology

Department: Psychology

Student: Austin Butler

Mentor: Allen Lyndrup

Title: Shakespeare Project Design, Research and Technical Drafting

Major: Theatre

Department: Theatre

Student: Steven Dix
Mentor: Sorinel Oprisan
Title: Computer-aided Classification of Biologically Relevant Firing Patterns of a Generic Neural Model

Major: Computer Science
Department: Physics & Astronomy

Student: Kevin Djordjevic
Mentor: Neal Tonks
Title: Development of Novel Heterogeneous Catalysts Supported on Polydimethylsiloxane Polymers for the Water Gas Shift Reaction, Utilizing Transition Metal Catalyst Developed In Homogeneous Systems.

Major: Biology
Department: Chemistry and Biochemistry

Student: Laura Ferguson
Mentor: Courtney Murren
Title: Measuring genetic variation in *Arabidopsis thaliana* to examine the influence of fine spatial scale differentiation in quantitative characters.

Major: Biology
Department: Biology

Student: Emily Fraglinger
Mentor: Wayne Smith
Title: Segmenting American Non-travellers

Major: Business Administration and Hospitality & Tourism Management
Department: Hospitality & Tourism Management

Student: Heather Hagler
Mentor: Chad Galuska
Title: Assessing Economic Demand for Food in Rats under Open Economies of Varying Session Duration

Major: Psychology
Department: Psychology

Student: Mary Harper
Mentor: Brad Trinkle
Title: The Association Between Country Specific Variables and the Internet Corporate Governance Disclosures of American Depository Receipts

Major: Accounting
Department: Accounting & Legal Studies

Student: Corbyn Harris
Mentor: Wendy Cory
Title: Development of a Stability Indicating Assay for Ibuprofen Tablets

Major: Biochemistry (Neuroscience minor)
Department: Chemistry and Biochemistry

Student: Harold Haun
Mentor: Michael Ruscio
Title: The Neuroendocrinology of Parental Care in the California Mouse (*Peromyscus californicus*)

Major: Psychology
Department: Psychology

Student: Thomas Jenkins
Mentor: Justin Wyatt
Title: Analogue Synthesis via the Selective Deletion of Oxygen Atoms, Side Chain Manipulations, and the Incorporation of Nitrogen into the Antibiotic Cyclosporine E

Major: Biology
Department: Chemistry and Biochemistry

Student: Meredith Kaywood
Mentor: Richard Lavrich
Title: Determination of the Secondary Structures Adopted by Small Gas Phase Peptides and Peptidomimetics Through Torsion-Rotation Interactions in Rotational Spectra

Major: Chemistry
Department: Chemistry and Biochemistry

Student: Corey Klein
Mentor: Neal Tonks
Title: Development of Novel Heterogeneous Catalysts Supported on Polydimethylsiloxane Polymers for the Water Gas Shift Reaction, Utilizing Transition Metal Catalyst Developed In Homogeneous Systems.

Major: Biochemistry
Department: Chemistry and Biochemistry

Student: Maria Martin
Mentor: Carol Ann Davis
Title: Literary Publishing Institute and Crazyhorse 76: Editorial Intern in Poetry
Major: English
Department: English

Student: Chris Marvin
Mentor: Jason Overby
Title: Modeling Active Sites by Synthetic Design of Useful Ligands and Their Metal Complexes
Major: Biochemistry and Chemistry
Department: Chemistry and Biochemistry

Student: Kalen McKnabb
Mentor: Vijay Vulava
Title: "Fingerprinting" Lithic Samples from an Archeological Site in Göksu Valley, Turkey
Major: Geology and Environmental Geosciences
Department: Geology and Environmental Geosciences

Student: Mary Ashley Mercer
Mentor: Mark Hurd
Title: Age-related Declines in Brainstem Regulation Affect Cortical Attention Networks
Major: Psychology
Department: Psychology and Neuroscience

Student: Farah Moustafa
Mentor: Ana Zimmerman
Title: Zebrafish IgD: Exon Usage; Chimersim; and Comparative Quantitative Expression Profiles to Other Heavy Chain Isotypes.
Major: Biology
Department: Biology

Student: Virginia Murphy
Mentor: Vijay Vulava
Title: Binding and Transport of Pharmaceutical Chemicals in Soil Environment
Major: Geology and Environmental Geosciences
Department: Geology and Environmental Geosciences

Student: Angelian Phebus
Mentor: James Newhard
Title: New Approaches to Interpreting Human Land Use in North Central Anatolia
Major: Classics
Department: Classics

Student: Elizabeth Redpath
Mentor: Charles Beam
Title: Regioselective Syntheses of Important Azoles and Pyrans Employing Polythiated Intermediates
Major: Biology
Department: Chemistry and Biochemistry

Student: Erin Smith
Mentor: Ralph Muldrow
Title: An Evaluation of Preservation Approaches to French and Italian Vernacular Architecture
Major: Historic Preservation
Department: Art History & Historic Preservation and Community Planning

Student: Juliana Smith
Mentor: Adam Dought and Chad Galuska
Title: Does Reward Size Matter? Effects of Reinforcer magnitude on Counting Accuracy in Rats
Major: Psychology
Department: Psychology

Student: Daniel Smith
Mentor: Richard Lavrich
Title: Design, Construction, Optimization, and Characterization of Biosensors Based on Functionalized Polydiacetylenes
Major: Biochemistry
Department: Chemistry and Biochemistry

Student: Ellyn Smith
Mentor: Charles Beam
Title: Strong Base Multiple Anion Preparation of Substituted Pyrazoles, Isoxazoles and Pyranones
Major: Biochemistry
Department: Chemistry and Biochemistry

Student: Michelle Strick
Mentor: Mark Sloan
Title: Present Tense: Vestiges of the Civil War

Major: Urban Studies
Department: Arts Management

Student: Andrew Stubenrauch
Mentor: Amy Rogers

Major: Biology
Department: Chemistry and Biochemistry

Title: How does pH Affect the Ability of Tetrahydrobiopterin and Tetrahydrobiopterin Analogs to Donate a Proton to the Catalytic Cycle of Nitric Oxide Synthase?

Student: David Thomas
Mentor: Timothy Scheett

Major: Physical Education
Department: Health and Human Performance

Title: Effect of a Carbohydrate-restricted Diet With and Without Resistance Training on Immune Function and Indices of Health

Student: Jennifer Thomas
Mentor: Allison Welch

Major: Biology
Department: Biology

Title: Genetic Correlation in Tolerance to Different Stressors - A test Using Salinity, Insecticide, and Green Treefrog Tadpoles

Student: Megan Valentine
Mentor: Matthew Rutter

Major: Biology
Department: Biology

Title: Measuring Fitness in Knockout Mutations in *Arabidopsis thaliana*: Testing Hypotheses About Genetic Redundancy and Environmental Context

Student: Zichao Wang
Mentor: Gamil Guirgis

Major: Biochemistry
Department: Chemistry and Biochemistry

Title: Synthesis, Conformational Stability, Theoretical Study of 1, 3, 5-trioxatrisilane Using Laser Raman and Infrared Spectroscopy

Student: Allyson Wilson
Mentor: Eric McElroy

Major: Biology
Department: Biology

Title: Does Relative Predation Pressure Result in a Tradeoff Between Communication and Anti-predatory Strategy in Three Divergent Populations of Green Anoles?

Student: Erin Wooten
Mentor: Michael Duvall

Major: English
Department: English

Title: Alienation/Assimilation/Americanization: African American Literature, Racial Uplift, and Immigration at the Turn of the Twentieth Century