



Office of Undergraduate Research

UNIVERSITY OF SOUTH CAROLINA

2023 Summer Research Symposium

Thursday, July 27, 10:00am – 11:30am and 1:00 – 2:30 pm

Hollings Program Room at the Thomas Cooper Library

*Sponsored by the Office of Undergraduate Research
and the Office of the Vice President for Research*

MORNING SESSION 10:00 am – 11:30 am

NSF REU: Disparities in the Criminal Justice System

1 - Beyond George Floyd: Assessing Sentiments on Police Fund Reallocation and its Intersection with Race and Racial Resentment

Marshae Capers, University of South Florida; Criminology- Senior

Jordan I. Cline, Wichita State University; Criminal Justice- Senior

Akili Murphy, Fayetteville State University; Criminal Justice-Senior

Mentor: Dr. Christi Metcalfe, USC Columbia- Criminology and Criminal Justice

Ms. Jillian Chamberlain, USC Columbia- Criminology and Criminal Justice

2 - Exploring the Views of Courtroom Actors on Domestic Violence Case Processing

Chase J. Freeman, University of Arkansas; African American Studies, Criminology, French, History, Sociology- Senior

Isabella Ferreira, State University of New York at Cortland; Psychology- Senior

Jordan N. Gonzalez, University of Denver; Sociology, Psychology- Senior

Mentor: Dr. Barbara Koons-Witt, USC Columbia- Criminology and Criminal Justice

Ms. Sophia Shaiman, USC Columbia- Criminology and Criminal Justice

3 - A Neighborhood-Level Investigation Assessing the Relationship of Social Determinants of Health and Firearm Violence in South Carolina

Alex Jones, Lycoming College; Criminology, Spanish- Junior

Morgan McMains-Nurisio, Rice University; Sociology, Social Policy Analysis, Psychology- Senior

Kayon Morgan, Vermont State University – Castleton; Political Science- Senior

Mentor: Dr. Hunter Boehme, USC Columbia- Criminology and Criminal Justice

Mr. Jeffrey Trowbridge, USC Columbia- Criminology and Criminal Justice

TRIO McNair Scholars Program

4 - Examining the Impact of Vision Care Programs on Academic Performance in Underserved Elementary Schools In South Carolina

Anna Nguyen, USC Columbia; Public Health- Senior

Mentor: Dr. Meeta Banerjee, USC Columbia- Psychology

Dr. Tegia Coleman-Rochester, USC Columbia- Ronald E. McNair Program Director

5 - Addiction as a Disease: Increased Normalization of Addictive Behaviors and Perceptions Towards Substance Use

Aditi Rudrashetty, USC Columbia; Neuroscience- Senior

Mentor: Dr. Florencia Cornet, USC Columbia- TRIO-Opportunity Scholars Program

Dr. Tegia Coleman-Rochester, USC Columbia- Ronald E. McNair Program Director

6 - Do Nurses Personality Traits Determine Their Specialization?

Chemora Duncan, Voorhees University; Biology- Junior

Mentor: Dr. Jessica Barnes, USC Columbia- Geography and Earth, Ocean, and Environment

Dr. Tegia Coleman-Rochester, USC Columbia- Ronald E. McNair Program Director

7 - The Impact of the Gut Microbiome on Inflammatory Diseases

Sabrina Berisha, USC Columbia; Biological Sciences- Senior

Mentor: Dr. Jessica Barnes, USC Columbia- Geography and Earth, Ocean, and Environment

Dr. Tegia Coleman-Rochester, USC Columbia- Ronald E. McNair Program Director

8 - Lack of Equity in Medical Practice: Disparities in Pain Treatment between African Americans & Caucasians

Sierra Brown, USC Beaufort; Nursing- Junior

Mentor: Dr. Florencia Cornet, USC Columbia- TRIO-Opportunity Scholars Program

Dr. Tegia Coleman-Rochester, USC Columbia- Ronald E. McNair Program Director

9- The Effects of Exposure to Domestic Violence on Children's Development.

Andrea Santibanez, USC Beaufort; Psychology- Junior

Mentor: Dr. Daniel Cooper, USC Columbia- Psychology

Dr. Tegia Coleman-Rochester, USC Columbia- Ronald E. McNair Program Director

10 - Understanding Huntington's Disease and its Impact on Families Affected

RoseMarie Van Etten, USC Beaufort; Early Childhood Education- Junior

Mentor: Dr. Jamil Khan, USC Columbia- Mechanical Engineering

Dr. Tegia Coleman-Rochester, USC Columbia- Ronald E. McNair Program Director

11 - The Mental Health Impacts of Social Media Among Adolescents: Exploring the Perspectives

Ja'Courtney Waddy, Benedict College; Public Health- Senior

Mentor: Dr. Jessica Barnes, USC Columbia- Geography and Earth, Ocean, and Environment

Dr. Tegia Coleman-Rochester, USC Columbia- Ronald E. McNair Program Director

12 - Addressing Childhood Obesity in African Americans Through Improving Food Literacy and Developing Cooking Skills

Timothy Wiley, South Carolina State University; Nutrition- Senior

Mentor: Dr. Jamil Khan, USC-Columbia, Mechanical Engineering

Dr. Tegia Coleman-Rochester, USC Columbia- Ronald E. McNair Program Director

13 - To Reduce Recidivism, We Must Acknowledge Systematic Racism

Kaniyah Williams, USC Columbia; Criminal justice- Junior

Mentor: Dr. Daniel Cooper, USC Columbia- Psychology

Dr. Tegia Coleman-Rochester, USC Columbia- Ronald E. McNair Program Director

14 - Exploring the Efficacy of Resources for Black and Indigenous Women after Sexual Violence

Alivia Gillespie, Claflin University; Biology- Senior

Mentor: Dr. Meeta Banerjee, USC Columbia- Psychology

Dr. Tegia Coleman-Rochester, USC Columbia- Ronald E. McNair Program Director

15 - Understanding the Factors Contributing to Black Women's High Maternal Mortality Rate in South Carolina

Rose Hassouneh, USC Columbia; Biomedical Engineering- Senior

Mentor: Dr. Jamil Khan, USC Columbia-Columbia, College of Engineering and Computing

Dr. Tegia Coleman-Rochester, USC Columbia- Ronald E. McNair Program Director

16- Examining Experiences of African American Women Living in A Society That Prioritizes Eurocentric Traditional Femininity Roles

Keyonne McKnight, USC Columbia; Biological Sciences- Senior

Mentor: Dr. Daniel Cooper, USC Columbia- Psychology

Dr. Tegia Coleman-Rochester, USC Columbia- Ronald E. McNair Program Director

17 - Whole Genome Sequencing: Considering Regulations, Policies, and Procedures

Nyaw Too, USC Columbia; Psychology- Senior

Mentor: Dr. Florencia Cornet, USC Columbia- TRIO-Opportunity Scholars Program

Dr. Tegia Coleman-Rochester, USC Columbia- Ronald E. McNair Program Director

18 - Breaking Barriers: Examining the Contributing Factors to Suicide Among the Black Male Population

Traniah Neal, USC Columbia; Psychology- Junior

Mentor: Dr. Meeta Banerjee, USC Columbia- Psychology

Dr. Tegia Coleman-Rochester, USC Columbia- Ronald E. McNair Program Director

19 - Dear Mama: The Impact Single African American Mothers Have on Their Sons' Educational Attainment in South Carolina

Lawrenz Ellman-Sanders, Voorhees University; Business Administration- Junior

Mentor: Dr. Florencia Cornet, USC Columbia- TRIO-Opportunity Scholars Program

Dr. Tegia Coleman-Rochester, USC Columbia- Ronald E. McNair Program Director

McNair Junior Fellows

21 - Nondestructive Evaluation of a Composite Boom

Mascot Agho, USC Columbia; Mechanical Engineering- Sophomore

Mentors: Dr. Ramy Harik, USC Columbia- Mechanical Engineering

Mr. Will Montgomery, USC Columbia- Mechanical Engineering

22- Reallocating Labor in Industrial Facilities through Integrating Autonomous Mobile Robots

Owen Bennett, USC Columbia; Mechanical Engineering- Sophomore

Mentor: Dr. Ramy Harik, USC Columbia- Mechanical Engineering

23 - A Novel Design of Virtual Reality-Based User Interface in a Robot-Assisted Environment for User Engagement

Gabriel Blackwell, USC Columbia; Computer Engineering- Junior

Mentor: Dr. Dezhi Wu, USC Columbia- Integrated Information Technology

24 - Anti-contractile Effect of Lipoprotein Lipase Activation on Mesenteric Resistance Arteries is Lost with Aging.

Jacob Brezner, USC Columbia; Biomedical engineering – Junior

Mentor: Dr. Cameron McCarthy, USC Columbia- Cell Biology and Anatomy

25 - Optimization of Surface Roughness for Laser Powder Bed Fusion Additive Manufacturing using Universal Kriging

Matthew Burnett, USC Columbia; Aerospace Engineering- Junior

Mentors: Dr. Lang Yuan, USC Columbia- Mechanical Engineering

Dr. Austin Downey, USC Columbia- Mechanical Engineering

26 - Online Damage Detection Using Topological Data Analysis

Daniel Coble, USC Columbia; Mechanical Engineering, Mathematics- Senior

Mentor: Dr. Austin Downey, USC Columbia- Mechanical Engineering

27 - Measuring the Interlayer Strength of MXene-based Multilayer Membranes

Kollin Fillman, USC Columbia; Biomedical Engineering- Senior

Mentor: Dr. Nader Taheri Qazvini, USC Columbia- Chemical Engineering and Biomedical Engineering

28 - Testing of Reconfigurable Neural Network Implementation

Jacob Frierson, USC Columbia; Computer Engineering- Senior

Mentor: Dr. Rasha Karakchi, USC Columbia- Computer Science & Engineering

29 - Upcycling Polyurethane Waste to Green Products Using Lignin Biomass

Lauren Garrett USC Columbia; Chemical Engineering- Junior

Mentor: Dr. Monirosadat Sadati, USC Columbia- Chemical Engineering

Dr. Nikfarjam Nasser, USC Columbia- Chemical Engineering

30 - Spider Leg Inspires Soft Robotic Bending Actuators

Andrew Grullon, USC Columbia; Aerospace Engineering- Freshman

Mentor: Dr. Andrew Gross, USC Columbia- Mechanical Engineering

31 - Drop Conductivity Rain Gauge

Christopher Heaps, USC Columbia; Aerospace Engineering- Senior

Mentor: Dr. Jasim Imran, USC Columbia- Civil and Environmental Engineering

32 - UAV-Based Internal Wind Turbine Blade Inspection

Hudson Hok, USC Columbia; Computer Engineering- Senior

Mentor: Dr. Nikolaos Vitzilaios, USC Columbia- Mechanical Engineering

33 - Tuning the Thermoelectric Properties of Epitaxial SrRuO₃ Thin Films by Controlling Oxygen Vacancies

JonPaul Hooks, USC Columbia; Aerospace Engineering- Junior

Mentor: Dr. Dongkyu Lee, USC Columbia- Mechanical Engineering

Mr. Mohammad El Loubani, USC Columbia- Mechanical Engineering

34 - A Virtual Reality Interface Design for Children with Autism Spectrum Disorder to Improve Their Collaborative Problem Solving

Hsi En Hsu, USC Columbia; Integrated Information Technology- Junior

Mentor: Dr. Dezhi Wu, USC Columbia- Integrated Information Technology

35 - Pulsed Nuclear Magnetic Resonance Spectroscopy

Winford Janvrin, USC Columbia; Mechanical Engineering- Junior

Mentor: Dr. Austin Downey, USC Columbia- Mechanical Engineering

36 - In Chatbots We Trust? - A Start With Their Fairness

Rae Jones, USC Columbia; Computer Science- Junior

Mentor: Dr. Biplav Srivastava, USC Columbia- Computer Science and Engineering

Mr. Kausik Lakkaraju, USC Columbia- Computer Science

37 - Mechano-metamaterials Inspired by Blue Phase Liquid Crystals

Justin Jordan, USC Columbia; Chemical Engineering – Junior

Mentor: Dr. Monirosadat Sadati, USC Columbia- Chemical Engineering

38 - TEAMING FOR IIT-ROORKEE

Azariah Laulusa, USC Columbia; Computer Engineering- Senior

Mentor: Dr. Biplav Srivastava, USC Columbia- Computer Science and Engineering

Ms. Likitha Valluru, USC Columbia- Computer Science

39 - Development of Fuel Injector System Producing Isolated Single Fuel Droplets Smaller than 100 Micron

Matthew Loewer, USC Columbia; Aerospace Engineering- Junior

Mentor: Dr. Sang Hee Won, USC Columbia- Aerospace Engineering and Mechanical Engineering

40 - USC Ridesharing

Siddhartha Malik, USC Columbia; Mechanical Engineering – Junior

Mentor: Prof. Travis Dalton, USC Columbia- Integrated Information Technology

41 - Alterations in Geometrical Strain Result in Changes in Stem Cell Properties

Haley Pepper, USC Columbia; Biomedical Engineering- Senior

Mentor: Dr. Jay Potts, USC Columbia- Cell Biology and Anatomy

42 - Introduction to Neural Networking - Simple NN for Digit Recognition

Noah Robertson, USC Columbia; Computer Engineering- Senior

Mentor: Dr. Rasha Karakchi, USC Columbia- Computer Science and Engineering

43 - Examination of Augmented Reality in Manufacturing

Widny Seizeme, USC Columbia; Mechanical Engineering- Junior

Mentor: Dr. Ramy Harik, USC Columbia- Mechanical Engineering

Mr. Victor Gadow, USC Columbia- Mechanical Engineering

44 - Understanding of Interface-property Relationships of Vertically Aligned Ruddlesden-Popper Oxide Heterostructures

Dev Shah, USC Columbia; Mechanical Engineering – Junior

Mentor: Dr. Dongkyu Lee, USC Columbia- Mechanical Engineering

45 - Designing a Virtual Reality Interface to Engage Users for Solving a Rubik's Cube on a Digital Platform

Amelia Silver, USC Columbia; Computer Science- Junior

Mentor: Dr. Dezhi Wu, USC Columbia- Integrated Information Technology

46 - A Speech-To-Text Interface Design for Effective Communication Between Physicians and Deaf Patients

Amitta Souththivong, USC Columbia; IIT- Senior

Mentor: Dr. Dezhi Wu, USC Columbia- Integrated Information Technology

47 - Reallocating Labor in Industrial Facilities through Integrating Autonomous Mobile Robots

Kerem Tekin, USC Columbia; Aerospace Engineering- Senior

Mentor: Dr. Ramy Harik, USC Columbia- Mechanical Engineering

48 - Securing the Supply Chain

Brogan Theobald, USC Columbia; Information technology- Senior

Mentor: Prof. Neset Hikmet, USC Columbia- Integrated Information Technology

49 - Application of Python to Predict Cyclic Soil Testing Behaviors

Edward Tupacz, USC Columbia; Computer Science- Senior

Mentor: Dr. Inthuorn Sasanakul, USC Columbia- Civil and Environmental Engineering

50 - Chemical Reaction Prediction at the Reaction Mechanism Level

Ian Turner, USC Columbia; Computer Engineering- Junior

Mentor: Dr. Forest Agostinelli, USC Columbia- Computer Science and Engineering

51 - AvianAI: An Application of Computer Vision and Machine Learning for Wildlife Monitoring and Conservation

Ryan VanWyk, USC Columbia; Chemical Engineering- Senior

Mentor: Ms. Sowmya Raghu, USC Columbia- Mechanical Engineering

52 - FPGA-based DSP System for Compact NMR

David Wamai, USC Columbia; Computer Science- Junior

Mentor: Dr. Austin Downey, USC Columbia- Mechanical Engineering

53 - NMR: Advanced Sine Wave Generation and Analysis for Particle Concentration Measurement and Fuel Classification

Jackie Wang, USC Columbia; Computer Engineering- Junior

Mentor: Dr. Austin Downey, USC Columbia- Mechanical Engineering

54 - Configuration and Optimization Studies on Fully Noncontact Ultra-Wideband Laser Based Nondestructive Evaluation Methods

Colby Weeks, USC Columbia; Aerospace Engineering- Senior

Mentor: Dr. Lingyu Yu, USC Columbia- Mechanical Engineering

Mr. Andrew Campbell, USC Columbia- Mechanical Engineering

AFTERNOON SESSION 1:00 – 2:30 pm

Psychology, Biology and Health Sciences

1-The ImPACT study: Examining the Relationship Between Parenting Quality and Children's Behavior

Varshitha Karveti, USC Columbia; Biological Sciences- Senior

Sania Blackman, USC Columbia; Psychology- Senior

Robert John, USC Columbia; Psychology- Senior

Jalon Conway, USC Columbia; Psychology- Senior

Mentor: Dr. Nada Goodrum, USC Columbia- Psychology

2-Genome Skimming of Illumina Whole-genome Shotgun Data Yields Eleven Complete Black Coral Mitogenomes (Cnidaria: Anthozoa: Hexacorallia: Antipatharia)

Jacob Eli Wright, USCB; Biology- Sophomore

Anneau Appelmann, USCB; Biology- Senior

Brendan Cruz, USCB Biology - Sophomore

Mentor: Dr. Mercer Brugler, USCB- Biological Sciences

3-The Relationship between Dental Health, Brain Health, and Cognition in Healthy Adults

Santosh Kudaravalli, River Bluff High School- Senior

Mentor: Dr. Roger Newman-Norlund, USC Columbia- Psychology

4-Isolation and Characterization of New Bacteriophage that Infect Caulobacter

Payton Campbell, USC Columbia; Public Health- Sophomore

Mentor: Dr. Berten Ely, USC Columbia- Biology

5-Self-reported Outcomes of Pregnancy in Persons in Cancer Remission

Dana Burks, Benedict College; Psychology- Senior

Mentor: Dr. Ciaran Fairman, USC Columbia- Exercise Science Department

Dr. Abbi Lane, USC Columbia- Exercise Science Department

6- An examination of inter-limb functional asymmetry after a fatiguing bout of exercise in high-level soccer players

Lilly Jacobs, USC Columbia; Exercise Science- Senior

Mentor: Dr. Shawn Arent, USC Columbia- Exercise Science

Ms. Gianna Mastrofini, USC Columbia- Exercise Science

Mr. Nestor Urrea, USC Columbia- Exercise Science

7-Elasmobranch Microbes as a Source of Novel Antibiotics

Matthew Holt, USC Beaufort; Biology- Junior

Mentor: Dr. Kimberly Ritchie, USC Beaufort- Natural Sciences

8-Sexual Dimorphic Responses to Chronic Light Exposure in the Medial Amygdala

Janhvi Kartik, USC Columbia; Biochemistry and Molecular Biology- Junior

Mentor: Dr. Alessandra Porcu, USC Columbia- Drug Discovery and Biomedical Sciences

Morris College - USC Research Program

10-Isolation and Characterization of a New Phage from Rocky Branch Creek

Jir'Bre Brown, Morris College; Biology- Senior

Mentor: Dr. Bert Ely, USC Columbia-Biological Sciences

11-Strengthening Awareness: Understanding the Link Between AI and Phishing

Deondre' Davis, Morris College; Cybersecurity- Sophomore

Mentor: Dr. Dezhi Wu, USC Columbia- Integrated Information Technology

Mr. Sai Vuruma, USC Columbia- Integrated Information Technology

12-Word Finding Issues in Mothers with the FRM1 Premutation

India Rhaney, Morris College; Biology- Sophomore

Mentor: Dr. Jessica Klusek, USC Columbia- Communication Sciences and Disorders

13-Reimagining Learning: A New Understanding to Mathematics

Bravion Rose, Morris College; Mathematics- Junior

Mentor: Dr. Paula Vasquez, USC Columbia- Mathematics

14-Research Specialist: Lab of Vector Borne Diseases

Emily Washington, Morris College; Biology- Senior

Mentor: Dr. Melissa Nolan, USC Columbia -Department of Epidemiology and Biostatistics

Ms. Kirsti Gilmore, USC Columbia- Epidemiology and Biostatistics

NSF REU: CO₂ Chemical Engineering Opportunities and Challenges

16-Concurrent Electrocatalytic Reduction of CO₂ and Oxidation of SO₂

Josh Blatt, NJIT; Chemical Engineering- Senior

Mentors: Dr. Ben Meekins, USC Columbia- Chemical Engineering

Dr. Sirivatch Shimpalee, USC Columbia- Chemical Engineering

17-Characterization of Highly Dispersed Metal Catalysts via Infrared Spectroscopy and X-Ray Diffraction: From Isolated Atoms to Clusters

Kolton Dean, University of South Florida; Chemical Engineering-Senior

Mentors: Dr. Christopher Williams, USC Columbia- Chemical Engineering

Dr. John Regalbuto, USC Columbia- Chemical Engineering

18-Packed Bed Fluidization Conditions throughout a 4-Step Pressure Swing Adsorption Cycle

Dylan Ernst, University of Kentucky; Chemical Engineering- Junior

Mentors: Dr. Armin Ebner, USC Columbia- Chemical Engineering

Mr. Charles Holland, USC Columbia- Chemical Engineering

Dr. James Ritter, USC Columbia- Chemical Engineering

19-Development of High-Conductivity Polymer-Based Solid Electrolyte for Structural Batteries

Colton Free, Michigan Technological University; Chemical Engineering- Junior

Mentors: Dr. Ralph White, USC Columbia- Chemical Engineering

Dr. Paul Coman, USC Columbia- Chemical Engineering

Dr. Nasser Nikfarjam, USC Columbia-Chemical Engineering

20-Promise of Electrochemical Technologies to Reduce CO₂ Emissions

Valerie Hiemer, Virginia Polytechnic Institute and State University; Chemical Engineering- Junior

Mentors: Dr. William Mustain, USC Columbia- Chemical Engineering

Mr. Ian Street, USC Columbia- Chemical Engineering

21-Synthesis of PtCu Catalysts for Electrochemical Ethylamine/Acetonitrile Half-Cell Reaction

Laura Newsom, North Carolina State University; Chemical Engineering- Junior

Mentors: Dr. Zhenmeng Peng, USC Columbia- Chemical Engineering

Ms. Jinyao Tang, USC Columbia- Chemical Engineering

22-Machine Learning Investigation of Novel Ammonia Synthesis Catalysts

Griffin Paddock, Virginia Tech; B.S. Chemistry, B.S. Mathematics- Junior

Mentor: Dr. Jochen Lauterbach, USC Columbia- Chemical Engineering

Mr. Rasika Jayarathna, USC Columbia- Chemical Engineering

Dr. Thossaporn Onsree, USC Columbia- Chemical Engineering

23-Kinetics of Methanol Synthesis on Commercial Copper Catalysts

Carter Pryor, University of Kentucky; Chemistry- Junior

Mentor: Dr. John Monnier, USC Columbia- Chemical Engineering

Dr. John Tengco, USC Columbia- Chemical Engineering

24-Characterization of Well-dispersed Ruthenium Nanoparticles on Alumina Synthesized by Reverse Micelle Method

Tori Rogers, University of Tennessee; Chemical Engineering- Junior

Mentor: Dr. Jochen Lauterbach, USC Columbia- Chemical Engineering

Mr. Kanan Shikhaliyev, USC Columbia- Chemical Engineering

Mr. Majid Ghoreishian, USC Columbia- Chemical Engineering

NSF REU: Engineering Medical Advances at the Interface of Experiments and Computation

26-Computational Model for 2-Dimensional Cancer Cell Migration

Emma Bi, University of California Berkeley; Neurobiology and Data Science – Junior

Mentors: Dr. Qi Wang, USC Columbia- Mathematics

Dr. Guiren Wang, USC Columbia- Mechanical Engineering

27-NLRP3 Inflammasome Inhibition Attenuates Inflammation-Induced Vascular Dysfunction in Mice Aorta

Abigail Caridi, University of Delaware; Biomedical Engineering- Sophomore

Mentor: Dr. Clinton Webb, USC Columbia- Biomedical Engineering

28-Acoustic Testing of Skyrmion Structures to Determine Functionality in Metamaterials

Anthony Hasley, University of Mississippi; Biomedical Engineering- Junior

Mentors: Dr. Monirosadat Sadati, USC Columbia- Chemical Engineering

Mr. Jeremy Money, USC Columbia- Chemical Engineering

29-Phenomena and Mechanism of Cell Migration in Free Space Under Osmotic Pressure

Muriel Moon, Oberlin College; Neuroscience- Sophomore

Mentors: Dr. Guiren Wang, USC Columbia- Mechanical Engineering and Biomedical Engineering

Dr. Qi Wang, USC Columbia- Mathematics

30-Design and Fabrication of Acoustic Metamaterials Modeled by Defect Structures of Blue Phases
Jose Orellana Guzman, University of Maryland, Baltimore County; Mechanical Engineering- Sophomore
Mentors: Dr. Monirosadat Sadati, USC Columbia- Chemical Engineering
Mr. Jeremy Money, USC Columbia- Chemical Engineering

31-Peptoids as RAGE Antagonists: Simulating Novel Alzheimer's Treatments
Jack Stevenson, Oregon State University; Computer Science- Senior
Mentors: Dr. Melissa Moss, USC Columbia- Biomedical Engineering
Dr. Tao Wei, Howard University- Chemical Engineering

32- The Snapping Shrimp: Biomimetic Inspiration for Shockwave Protection
Catherine Zhou, Georgia Institute of Technology; Biomedical Engineering- Sophomore
Mia Kazel, USC Columbia; Biomedical Engineering- Junior
Mentors: Dr. Tarek Shazly, USC Columbia- Mechanical Engineering and Biomedical Engineering
Dr. Ahmed Alshareef, USC Columbia- Mechanical Engineering and Biomedical Engineering
Dr. Daniel Speiser, USC Columbia- Biological Sciences

33- Computational and Finite Element Analysis of the Microstructural Properties of Snapping Shrimp
Farhan Hasib, Lehigh University; Computer Science- Junior
Mentors: Dr. Tarek Shazly, USC Columbia- Mechanical Engineering and Biomedical Engineering
Dr. Ahmed Alshareef, USC Columbia- Mechanical Engineering and Biomedical Engineering
Dr. Daniel Speiser, USC Columbia- Biological Sciences

SC Advancing Diversity in Aging Research

35-Effect of Endocannabinoids on Crohn's disease
Michael Austin, Claflin University; Biology- Junior
Mentor: Dr. Melissa Ellermann, USC Columbia- Microbiology

36-Investigating the Cellular and Molecular Effects of Aging on Fat Tissue in Drosophila Melanogaster
Justice Bell, Claflin University; Biochemistry- Senior
Mentor: Dr. Alissa Armstrong, USC Columbia- Biological Sciences

37-Verifying the Interaction between WWP1 and PSMF1 in the Regulation of Proteostasis
Jasmaine Donovan, South Carolina State University; Biology- Junior
Mentor: Dr. Lydia Matestic, USC Columbia- Biological Sciences

38-Pituitary Stem Cells in Aging
Ziya Middleton, Claflin University; Biology- Junior
Mentor: Dr. Shannon Davis, USC Columbia- Biological Sciences

39-Adaptive Multi Factor Authentication
Caleb Ryland, Claflin University; Computer Science- Junior
Mentor: Dr. Csilla Farkas, USC Columbia- Computer Science

40-Recognition of Fall Detection through Smartwatch Technology
Danali Simmons, Claflin University; Computer Engineering- Junior
Mentor: Dr. Homayoun Valafar, USC Columbia- Computing and Engineering

41-Understanding the Interplay of Brain Health, Autonomic Function, and Cognition across the Lifespan
Evan Simms, Claflin University; Biochemistry- Senior
Mentor: Ms. Sarah Newman-Norlund, USC Columbia- Public Health
Ms. Sarah Wilson, USC Columbia- Public Health

42-Validity of Smartwatches When Measuring Vital Signs

Shamaria Stroman, Claflin University; Computer Science- Junior

Mentor: Dr. Homayoun Valafar, USC Columbia- Computer Science & Engineering

43-Creating A Stable Cell Line Producing Chimeric Antibodies Targeting hCCL8

Maya Taylor, Claflin University; Biology- Senior

Mentors: Dr. Hippokratidis Kiaris, USC Columbia- Drug Discovery and Biomedical Sciences

Mr. Bernardo Chavez, USC Columbia- Drug Discovery and Biomedical Sciences

44-The Developmental Windows When Exposure to Antibiotics Increases Risk of Early Onset Colorectal Cancer

Nichelle Tomlin, Claflin University; Biology- Senior

Mentor: Dr. Maria Peña, USC Columbia- Biology

45-The Analysis of MPPs in Ing4- Mice

Spencer Yates, Claflin University; Biology- Junior

Mentor: Dr. Katie Kathrein, USC Columbia- Biological Sciences