

Presbyterian College Undergraduate Summer Research Symposium

Wednesday July 24, 2024

Presbyterian College Summer Fellows (PCSF)

South Carolina IDeA Networks of Biomedical Research Excellence (SC INBRE*)

South Carolina Independent Colleges and Universities (SCICU)

Organic Syntheses Research Grants for Faculty at Principally Undergraduate Institutions (OS PUI)

Coffee and Refreshments | 9:20 a.m. – 9:30 a.m. | Harrington-Peachtree (HP) Lobby

Introduction & Welcome | 9:30 a.m. – 9:35 a.m. | HP 214 (Amphitheater)

Welcome: Dr. Drew Brandel, '13, Director of PC Summer Fellows, Assistant Professor of Psychology

Presentations I | 9:40 a.m. – 10:40 a.m. | HP 214 (Amphitheater)

9:40-10:00 **MacKenzie Partsch (SC INBRE*)**

Utilization of Magnetically Induced Jamming in a Universal Gripper

Advisor: Eli T. Owens, Ph.D.

10:00-10:20 **Amanda Bailey (OS PUI)**

Targeted Delivery of Carbon Monoxide: Enhancing Therapeutic Potential Against ROS-Mediated Diseases

Advisor: Kimberly C. De La Cruz, Ph.D.

10:20-10:40 **Rivers Krask (SCICU)**

Understanding the Coordination Chemistry of Tellurium Supported by Redox-Active Ligands

Advisor: Caleb J. Tatebe, Ph.D.

Break | 10:40 a.m. – 11:00 a.m. | Harrington-Peachtree (HP) Lobby

Presentations II | 11:00 a.m. – 11:50 a.m. | HP 214 (Amphitheater)

11:00-11:30 **Margaret Leonard and Abbi Weatherford (SC INBRE*)**

The Synergistic Effects of BET Bromodomain Inhibitor JQ1 and Stress Induction in Triple Negative Breast Cancer Cells

Advisor: Austin Y. Shull, Ph.D.

11:30-11:50 **Reece Bradberry (SC INBRE*)**

The Identification of Bacteria for Mutagenesis Capability

Advisor: Stuart G. Gordon, Ph.D.

Lunch | 12:00 p.m. – 1:15 p.m. | HP Lobby and 214 (Amphitheater)

Keynote Address: **Dr. Anita Gustafson, President of Presbyterian College**

Research: Cultivating Pathways for Leadership

Poster Session | 2:00 p.m. – 3:15 p.m. | Library Reading Room (Main Floor)

Note: Posters are listed in alphabetical order by student last name.

Amanda Bailey (OS PUI)

Targeted Delivery of Carbon Monoxide: Enhancing Therapeutic Potential Against ROS-Mediated Diseases

Advisor: Kimberly C. De La Cruz, Ph.D.

Raiden Bailey (PCSF)

Inducing Fluidization in Granular Materials via Magnetic Fields

Advisor: Eli T. Owens, Ph.D.

Reece Bradberry (SC INBRE*)

The Identification of Bacteria for Mutagenesis Capability

Advisor: Stuart G. Gordon, Ph.D.

Warner Bush (PCSF)

Liberalism and Conservatism: A Study of Ideological Change in 21st-Century American Politics

Advisor: Erin S. McAdams, Ph.D.

Lasha Facey (SC INBRE*)

Displacement-Based and De Novo Construction Approaches for Fluorescent Carbon Monoxide Detection and Monitoring

Advisor: Kimberly C. De La Cruz, Ph.D.

Rivers Krask (SCICU)

Understanding the Coordination Chemistry of Tellurium Supported by Redox-Active Ligands

Advisor: Caleb J. Tatebe, Ph.D.

Margaret Leonard (SC INBRE*)

Specific Histone Arginine Methylation Sites Identified by Histone Proteomic Profiling are Depleted Through Dual p53 and PTEN Deletion in Metastasis-Transformed MCF10A Breast Cells

Advisor: Austin Y. Shull, Ph.D.

Bethany McManus (SC INBRE*)

Predicting Orthologous Groups of Proteins/Domains with Graph-Based Clustering Algorithm

Advisor: Margo Petukh, Ph.D.

MacKenzie Partsch (SC INBRE*)

Utilization of Magnetically Induced Jamming in a Universal Gripper

Advisor: Eli T. Owens, Ph.D.

Kayla Ponchamni (SC INBRE*)

α -Ketothioesters: Novel Approach for Carbon Monoxide Release for Therapeutic Applications

Advisor: Kimberly C. De La Cruz, Ph.D.

Caroline Rairigh (PCSF)

Combating Loneliness and Fostering Connection Among Today's College Students

Advisor: Drew S. Brandel, Ph.D.

Abigail Weatherford (SC INBRE*)

Open Chromatin Regions Identified by ATACseq Correspond with Overexpression of Metastatic Drivers in Dual p53/PTEN-Deleted Metastasis-Transformed MCF10A Breast Cells

Advisor: Austin Y. Shull, Ph.D.

Group Picture (All summer programs) | 3:20 p.m. | Front steps of the Library

*** Please note the following for all presentations within the SC-INBRE program:**

Research reported in this publication was supported by the National Institute of General Medical Sciences of the National Institutes of Health under Award Number P20GM103499. The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institutes of Health.