

Symposium for Student Research, Scholarship and Creative Achievement

Thursday, April 16, 2026

8:00 AM – 3:00 PM Registration

11:30 AM – 12:00 PM Lunch for Presenters and Faculty Mentors

12:15 PM Welcome from the Provost

Robert M. Smith Student Center Ballroom

POSTER PRESENTATIONS SCHEDULE 12:30 – 1:45 PM

Art

Floating Art Exhibition

Riley Lennon, Megan Evans, Mackenzie Kratsas, Alexis Ward, and Veronica Yeschke

Ms. Heather Hertel, Dr. Louis Christensen, Dr. Franklyn Charles, Dr. Jack Livingston, and Dr. Judith Silva

Biology

Cytotoxic Effects of Nicotine-Free Cinnamon-Flavored, Menthol-Flavored, and Unflavored E-Cigarette Vapor Condensate on Human Cell Lines

Adedayo Adegbulu

Dr. Stacy Hrizo and Dr. Jennifer Piechowski

Utilizing RNA-SEQ to Understand the Molecular Effects of Sublethal Concentrations of Imidacloprid in the Human Cell Lines SH-SY5Y and MCF7

Brandon Dedrick

Dr. Martin Buckley and Dr. Stacy Hrizo

Essential Oils and Antibiotic Properties

Parker Evans

Dr. Evan Guiney

DNA Purification and Sequencing of Wolf Creek Soil Across Five Weeks

Carmen Hay and Annabelle Gumble

Dr. Evan Guiney

Exploring Apis Mellifera Hindgut Microbial Growth

Olivia Humphrey

Dr. Amber Eade and Dr. Christopher Maltman

Investigation of Metal Resistant Bacteria from Acid Mine Drainage Environments and the Genetic Elements

Presenter: **Gianna Kraus**

Faculty Sponsor: Dr. Christopher Maltman

Biology

Tree Surveying the SRU Miller Tract: Analysis of Composition and Growth of Slippery Rock University's Miller Tract

Maycee McClure, Abigail Wrisley, and Blake Shedden

Dr. Cory Shoemaker

Characterizing Microbial Communities Associated with Non-Native Earthworm Decomposition Of Native and Invasive Plant Litter

Erin Melcher and Ashley Tegtmeier

Dr. Christopher Maltman

Divergence in Insect Population Diversity and Abundance Across Contrasting Habitat Types in Slippery Rock, Pennsylvania

Christian Mitchell

Dr. Cory Shoemaker

Selective Feeding by Lumbricus terrestris: Implications for Native and Invasive Plant Litter Decomposition

Madison Pifer

Dr. Cory Shoemaker

Career and Academic Progress

From Assessment to Impact: How LASSI and Success Coaching Support First-Year Student Success

Riley Whitehill

Ms. Emily McClaine

Chemistry & Environmental Geosciences

Investigation of Superfund Sites in Proximity to Minority Communities in Pennsylvania

Saige Stewart

Dr. Jack Livingston

Kinetic Characterization of Dihydrofolate Reductase Under Varying pH and Thermal Conditions

Adedayo Adegbulu, Annali Thomas, and Adam Travis

Dr. Ashley Loe

Purification of Alpha-Synuclein and the Subsequent Electron Spin Resonance Spectroscopy of the Protein upon Interaction with Curved Membranes

Cooper Alleman

Dr. Jessica Sarver

HPLC Analysis of Vitamin C Stability Under Different Storage Conditions

Haley Barner

Dr. Ryan Loe

Chemistry & Environmental Geosciences

Quantification of DHFR Through Protein Assays
Brooke Chewing, Kasey DeDominicis, Mackenzie Gross, and Carly Schreiber
Dr. Ashley Loe

*Mountain Paleoecology: Expedition Planning to Investigate
Miocene Fossil Localities in Colorado, U.S.A.*
Nicole Datta, Peyton Swan, and Niles Gardner
Dr. Fabian Hardy

Examining Mugwort Expansion in Pennsylvania Through Temporal Mapping
Nicole Datta
Dr. Alessia Zanin-Yost and Dr. Heike Hartmann

Investigating Harlansburg Cave
Jacob Etherson
Dr. Fabian Hardy

Enzyme Kinetics and Competitive Inhibition of Human Dihydrofolate Reductase
Keira Johnson, Colton Corrie, Sydney Smith, and Heer Zaveri
Dr. Ashley Loe

*Analysis of Protein Expression and Quantification in Escherichia Coli
Using SDS-PAGE and Comparative Protein Assays*
Victoria Kimpan, Alexandra Twaddell, Olivia Mayle, Elizabeth Perkins, and Madison McIver
Dr. Ashley Loe

Expression, Purification, and Immunodetection of GST-DHFR-HIS
Gianna Kraus, Carley Wright, and Kaylee Kobylski
Dr. Ashley Loe

Different Types of Cannabinoids in Relation to Alzheimer's Disease
Will Mason
Dr. Ashley Loe

Targeting Cannabinoid Receptors in Alzheimer's Disease
Vanessa Painter
Dr. Ashley Loe

Developing Acylhydrazones Derivatives as a Novel Group of Bioactive Agents
Michael Powell
Dr. Qi Chen

Kinetic Characterization and Inhibitor Profiling of Recombinant Dihydrofolate Reductase (DHFR)
Hunter Rossman, Anthony Robare, Cole Kovacic, and Gavin McKenna
Dr. Ashley Loe

Chemistry & Environmental Geosciences

Ecometric Investigation of Artiodactyl Locomotion in Miocene Assemblages from the Great Plains
Colin White, Raymond Walter, and Legend Wilkinson
Dr. Fabian Hardy

Communication, Media and Sport Management

An Analysis of the Astronomer Coldplay Kiss Cam Scandal Relative to Public Relations and Modern-Day Internet Behavior
Kaitlyn Casilli
Dr. Allison Peiritsch

Public Relations Case Study: Crisis Communication Evaluation Of Chipotle's E. Coli Crisis
Katie Gibson
Dr. Allison Peiritsch

Travel and Tourism following the Covid-19 Pandemic
Meghan Guiher
Dr. Katrina Quinn

Advanced Media Writing and Reporting: The Power of Reporting Community News
Josie Hart
Dr. Katrina Quinn

Are Student Athletes Supported? The Mental Health Landscape of Power Four Institutions
Roberto Olmo
Dr. Robert Zullo

Applying the Relational Investment Model to Collegiate Athlete's Decision to Transfer Institutions
Quinn Parson
Dr. Emily Dolan

Does Power Four College Athletics Utilize Tik Tok?
Alexander Griggs and Lily Ventresca
Dr. Robert Zullo

Bridging the NIL Gap: How Power Four Institutions Shape the Future for all Schools
Ethan Trettel
Dr. Robert Zullo

Computing & Security

Implementation and Evaluation of Authentication Methods in Virtual Reality
Eric Moffitt
Dr. Kwang Lee

Curriculum, Instruction, and Educational Leadership

Preserving Dominica's Indigenous Kalinago Heritage Through the Development of Culturally Relevant Curriculum Resources

Autumn Crawford and Maria Spedaliere

Dr. Enoch Nkana

Strategies for ELL Teachers

Samantha Guyer and Takashi Mukai

Dr. Jenna Copper and Dr. Junko Yamamoto

Social Emotional Learning in Literacy

Caitlin Miller

Dr. Jenna Copper

Engineering

Series Pressure Vessels for Use in Water Rockets

Jacob Cerra and Aedan Panzer

Dr. Louis Christensen

Cool Springs Creek Bridge Replacement

Bethany DeRose, Amber Maurer, Ashley Rimmel, Rachel Ferrick, and Zachary Donaldson

Dr. Robabeh Jazaei

Experimental Investigation on Disinfectant and Wastewater Mixing in Wastewater Systems

Rachell Lajara Flores and Van Westbrook

Dr. Sajad Hamidi

Leatherwood Creek Bridge Replacement

Samuel Miles

Dr. Robabeh Jazaei

Mapping and Efficiency Evaluation of the Macoskey Center

Greenhouse Radiant Floor Heating System

Janey Parks, Kurt Lambright, Shea Walton, Joshua Gonzalez, and Eliza Bentley

Dr. Louis Christensen

Soil Testing and Property Analysis of Rare Earth Enriched Acid Mine Drainage Sludge

Amina Tandukar

Dr. Iuri Santos

Energy Audit of the Macoskey Center Classroom

Martina Tatalias and Nicole Planter

Dr. Louis Christensen

Energy Audit of the Harmony House at the Macoskey Center

Priscilla Cole, Sean Cole, and Todd Hallman

Dr. Louis Christensen

Exercise Science

Kickoff Your Shoes and Squat: How Footwear Affects Muscle Activation
Erika Burket, Elizabeth Higgins, and Isabella Belko
Dr. Michael Holmstrup

Validation of Wrist Worn Devices for Blood Pressure Measurement
Matthew Deemer
Dr. Mingchia Yeh

Evaluating the Exercise is Medicine on Campus Program at Slippery Rock University
John Mackey
Dr. Joyan Urda and Dr. Steve Verba

Reps Until Regret: A Scientific Look at Training to Failure
Morgan Pisula, Alex Thompson, and Sean Hanley
Dr. Michael Holmstrup

Does Engaging in an Intergenerational Communication Program Change Ageist Attitudes in First-Year College of Health Professions Students
Seth Sculli and Rahel Hartman
Dr. Maureen Walsh and Dr. Betsy Kemeny

Health and Rehabilitation Sciences

Occupational Therapy in Cancer Care: Preparedness and Barriers
Sophia Duncan
Dr. Kenneth Reichl

Fontanelles: "Soft Spots" on the Skulls of Newborn Bats
Julia Loeffler
Dr. Timothy Smith

Healthcare and Administration

Exploring Interest in Emergency Medical Technician Training Among Undergraduate Health Professions Students
Spencer Freysinger
Dr. Alan Minor

History

Anarchists of the Allegheny: German Radicals in Gilded Age Pittsburgh
Cameron Antoniotti
Dr. Melissa Ford

The Madman's Ambition: Charles Guiteau, Memory, and the Assassination of James Garfield, 1881
Leah Harris
Dr. William Bergmann

History

Misrepresentation of Indigenous Culture in Horror Media

Chris Kirchner

Dr. William Bergmann

The Princess De Lamballe: A Woman's Death and the Memory of Violence in the French Revolution

Greta Walk

Dr. Corinne Gressang

Languages, Literatures, Cultures, and Writing

The "Elitification" of English: Chaucer's The Romance of the Rose and the Wife of Bath

Alyssa Vaughn

Dr. Marnie Petray-Covey

Mathematics, Statistics and Physics

Raman Spectroscopy's Role in the SHERLOC Mars Mission

Chamath Bandara

Dr. Krishna Mukherjee

Infrared Spectroscopy by JWST

Presenter: **Lucas Braun**

Faculty Sponsor: Dr. Krishna Mukherjee

Quantum Wells as Light Sources

MacKenzie Byrd

Dr. Krishna Mukherjee

Capabilities and Applications of SEM, AFM, and STM

David Eastman

Dr. Krishna Mukherjee

Comparison of Particle Colliders

Grant Gillham

Dr. Krishna Mukherjee

Superconducting Quantum Interference Devices

Brandon Green

Dr. Krishna Mukherjee

Importance of Quantum Dots in DNA Detection

Isaac Hightree

Dr. Krishna Mukherjee

Nuclear Fusion Reactors (Tokamak)

Tyler Pritts

Dr. Krishna Mukherjee

Mathematics, Statistics, and Physics

A Review of ZNS Crystal Defects and Applications
Audrey Schubert
Dr. Krishna Mukherjee

*Testing General Relativity about SGR A**
James Switzer
Dr. Krishna Mukherjee

Light's Magnetic Influence on Matter
Ethan Terza
Dr. Krishna Mukherjee

Psychology, Social Work and Recreational Therapy

Familial Relationships Effects on Endorsement of Traditional Romantic Relationship Events
Erica Anderson
Dr. Cynthia Hall

The Association Between Psychological Strain and Depression Among Collegiate Athletes
Isabella Bartoletti
Dr. Jennifer Willford

Neuroticism as a Personality Risk Factor for Depression Symptom Severity
Alayna Hanek
Dr. Beth Ann Rice

The Effectiveness of Listening to Preferred Music during Academic Tasks for Students with ADHD
Natalie Krulac
Dr. Betsy Kemeny

The Association Between Perceived Stress and Cognitive Performance
Angela Russell
Dr. Beth Ann Rice

The Late-Positive Potential: Tagging Words and Phrases for Emotional Memory Encoding
Carmella Ryan
Dr. Shannon McKnight

Social Sciences

Debunking the Claim that Immigrants Take Jobs from Americans
Raegan Czerniewski, Saige Stewart, Abigail Putnick, and Maxwell Atwood
Ms. Cheryl Kerchis

Do Immigrants Make Us Less Safe?
Allison Tucker, Alexis Craft, and Lex McCurdy
Ms. Cheryl Kerchis

Social Sciences

Investigating the Claim That All U.S. Immigrants Are Criminals
Sara Morar, Audrey Johnson, and Sophia Maritato
Ms. Cheryl Kerchis

Do Immigrants Take American Jobs?
Andrei Pagnotta, Laila Hackwelder, Nolan Holtz
Ms. Cheryl Kerchis

*Myth: Unauthorized Immigrants Do Not Pay Taxes But Still Receive
Federally Funded Safety Net Programs*
Connor Pavlicko, Kayla Nam, Carly Harakal, and Grace Sieg
Ms. Cheryl Kerchis

Innovation Within Immigration
Jada Phillips and Natalie Banks
Ms. Cheryl Kerchis

Special Education

Developing Future Special Educators
Paige Temple and Ellery Phanco
Dr. Jessica Hall-Wirth