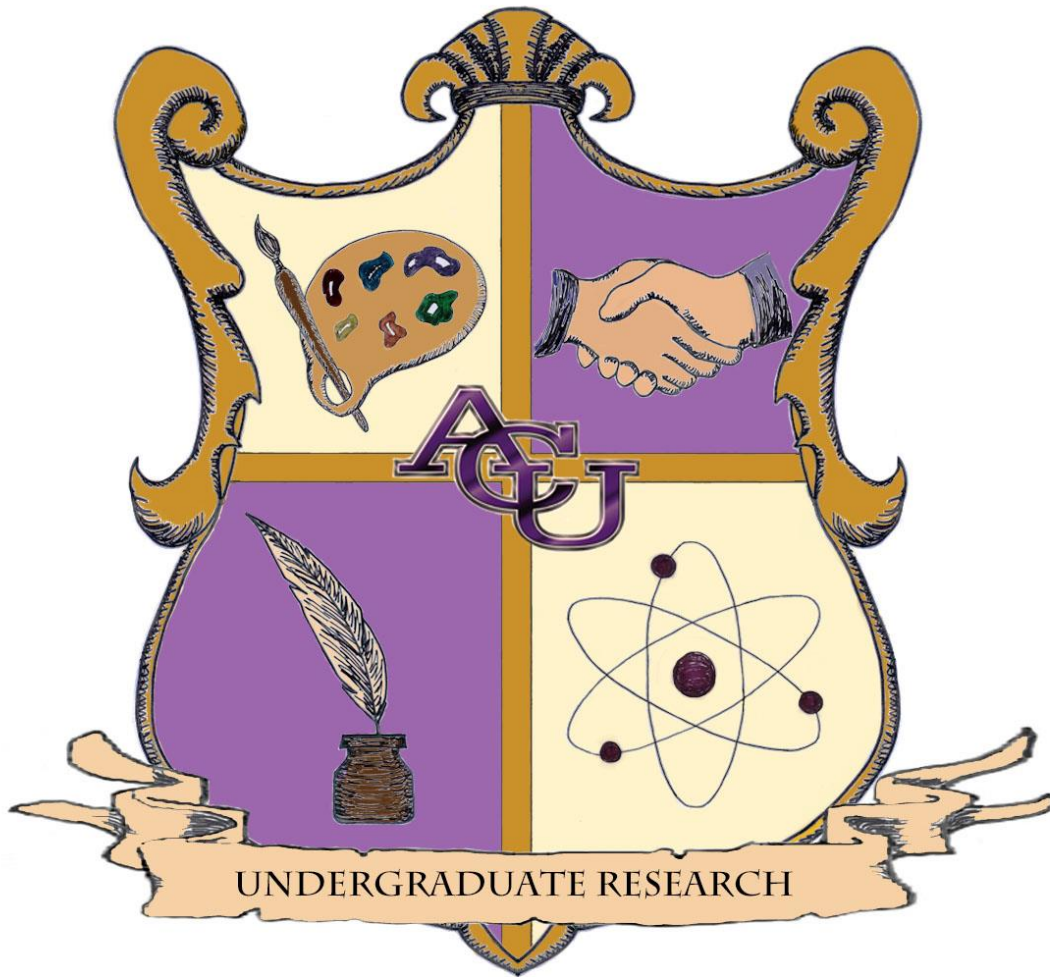


2016 ACU Undergraduate Research Festival




April 5, 2016

The ACU Undergraduate Research Festival

is brought to you by

The Office of Undergraduate Research.

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A Message from the Director:



Thank you so much for being a part of the 8th ACU Undergraduate Research Festival. It is so exciting to see the wide variety of research being done by undergraduates here at ACU. Those of us who have been involved in planning the Research Festival are so impressed with and proud of the work that students have been doing – work that requires intellectual curiosity, creativity, and critical thinking. Whether you are here to present, mentor, judge entries, or learn about others' research, I am so grateful that you are part of this day.

The Research Festival would not take place without the many hours of hard work put in by Research Festival Planning Committee. They have my deepest appreciation. I would also like to thank the Honors College and Graduate School for co-sponsoring this event.

Enjoy the Festival!

Dr. Autumn Sutherlin
ACU Director of Undergraduate Research

To view the complete festival program and abstracts online go to
blogs.acu.edu/researchfest/2016urfprogram/



blogs.acu.edu/researchfest/2016urfprogram/

Festival Schedule Overview

8:00 – 3:00 PM Registration

Hunter Welcome Center Hall of Honor

8:30 – 9:20 AM Oral Presentations

- A1. Studies in Culture - McCaleb Room Zone A
- A2. Issues in the Classroom - McCaleb Room Zone B
- A3. Culture Issues - Alumni Conference Room
- A4. Culture and Conflict - LYNAY Classroom

9:30 – 10:50 AM Oral Presentations

- B1. Analyzing Verbal and Nonverbal Messages - McCaleb Room Zone A
- B2. The Chemical Element Osmium- McCaleb Room Zone B
- B3. High Energy Nuclear Research– Alumni Conference Room
- B4. Issues of Diversity in Race, Gender, and Sexuality – LYNAY Classroom
- B5. War: Events and Issues - AT&T Theater

11:00 – 11:30 AM Chapel

McCaleb Room Zone B

11:45 – Lunch is served

McCaleb Room Zone C

12:00 – 12:40 PM Poster Session I

Atrium of the Hunter Welcome Center

12:45 – 1:20 PM Poster Session II

Atrium of the Hunter Welcome Center

1:30 – 2:50 PM Oral Presentations

- C1. International Issues - McCaleb Room Zone A
- C2. Chemistry, Biochemistry, and Physics Research - McCaleb Room Zone B
- C3. Nursing and Health Focus - Alumni Conference Room
- C4. Theater, Film, and Television - LYNAY Classroom

3:00 – 4:20 PM Oral Presentations

- D1. Mental and Physical Health – McCaleb Room Zone A
- D2. Contemporary Communication – Alumni Conference Room
- D3. Investigating Plants and Animals – AT&T Theater

5:30 – 6:30 Awards Dinner (Pre-registration required)

McCaleb Room Zone C

MORNING SESSIONS

Tuesday, April 5, 8:30 – 9:20 AM

Session A1: Studies in Culture - McCaleb Room Zone A

Study Abroad's Influence on Cultural Perceptions

Annie Bailey

French Immigration and Cultural Dissonance

Parker Pollard

Professionalism and Ethics: A Guided Study on Ferguson, Missouri

Chanel Brown & BaiLee Evans

Session A2: Issues in the Classroom - McCaleb Room Zone B

Reviring the iBrain: The Effects of Technology in the Classroom

Samantha Studvick

Understanding the Decision Making of First Year Teachers Regarding Reading Assessment and Instruction

Hannah Lowry

Graphic Terror: Comic Books in the Classroom

Maggie McAlister

Session A3: Cultural Issues - Alumni Conference Room

Elders in Black and White: J.S. Winston and the Impact of Institutional Racism on Church Leadership

Ian Nickerson

Whispers of Wilderness: Reconciling Humanity and Nature

Michelle Weidenaar

Ἡ Ἀνάγκη τῆς Ἀρετῆς : The Parthenon Marbles and Greek National Identity

Savannah Weeks

Session A4: Culture and Conflict - LYNAY Classroom

Homosexuality and Gender Expression in India

Chelsea Peer

Clash of Civilizations: Fact or Myth?

Kendra Oregon

Homosexual Adoption in Today's Society

Federica Vinera

Tuesday, April 5, 9:30 – 10:50 AM

Session B1: Analyzing Verbal and Nonverbal Messages - McCaleb Room Zone A

Cellphone Use as Nonverbal Communication

Hannah Chappell

For Those Who Can't Speak

Andrea Archer

Secrets Out: An analysis of Ashley Madison's Hacking System Crisis

Itzel Garcia De Alba

Moral Foundations of Presidential Primaries: An Analysis of Partisan Campaign Language

Courtney Tee, Barrett Corey, & Wesley Robbins

Aggression and Maternal Discipline in Adolescence

Fabiola Vargas

Session B2: The Chemical Element Osmium - McCaleb Room Zone B

Synthesis and Characterization of Osmium (I) Carboxylate Dimers

Kylie Wilson & Erica Lambert

Osmium-Containing Chemotherapeutic Drugs

David Marolf

New Triosmium Clusters with PTA Ligands

Kristen Brehm & Amanda Dugan

Syntheses of Water-Soluble Osmium Carbonyl Clusters

Joel Jackson & Soo Hun Yoon

Session B3: High Energy Nuclear Research – Alumni Conference Room

Using a Neural Network to Detect Dimuons for Fermilab Seaquest

Paul Carstens

Testing of Advanced Particle Detectors for the Next Generation Particle Collider

Hannah Hamilton

Measuring the Density of Liquid Targets in the SeaQuest Experiment

Zhaojia Xi

Development of an Electron Ion Collider Detector Test Stand

Cecily Towell

Data Reconstruction Analysis (E906/SeaQuest)

Lauren Selensky

Session B4: Issues of Diversity in Race, Gender, and Sexuality – LYNAY Classroom

Arab Feminism: History, Goals, Challenges - and a Promising Future

Andrew Brown

Liberated Divinity: The Experience of African American Females in Pastoral Leadership

Shaobeny Johnson

Gender Role Behavior and Sexual Orientation

Savannah Hipes

Biracial Identity Salience: Family, Community, and Media Influence on Identity Formation

Andrea Wiggins, Melanie Collazos, & Samone Smith

Cultural Behaviors and Attitudes for LGBTQ Christians at ACU

Diego González

Session B5: War: Events and Issues - AT&T Theater

Crossings: The Critical Role of Railroads in the Civil War

Coleton Spruill

The Screaming Eagles in the A Shau: Major Operations of the 101st Airborne Division in the A Shau Valley, 1968-1969

Coleman Stein

On Conflict

Aaron Steward

Bennie Lee Fudge: A Voice of Pacifism in World War II Returning to the Stone-Campbell Roots

Rachel Schaad

Missileers of the Cold War

Jessica Price

Tuesday, April 5, 11:00 – 11:30 AM

Chapel: McCaleb Room Zone B

Tuesday, April 5, 11:45 AM – 1:00 PM

Lunch: McCaleb Room Zone C

POSTER SESSIONS

Tuesday, April 5, 12:45 – 1:20 PM

Tuesday, April 5, 12:00 – 12:40 PM

Poster Session I: Hunter Welcome Center Atrium

- The Process and Importance of Film Adaptations of Novels*
Angela Fogle
- The Effects of the First World War on European Environment and Health*
Joshua DeLeon
- The Effect of an Interprofessional Educational Simulation Exercise on Perceptions*
Kennedy Morrison
- Long Term Affects of Speech Therapy on Aphasia*
Regine Yaites
- No Change in Perceptual or Chronotropic Outcome When Altering Preferred Step Frequency for a Short Duration*
Megan Kriger, Jill Baker, Gloria Haynes, Marlee Jones, Heather Markgraf, Janice Nkrumah, & Brianna Phillips
- Antibiotic Resistance and Biosynthetic Potential of Microbes Isolated from Sorcerer's Cave, Texas*
Jeffrey Wooliscroft
- Quantifying Wolbachia and Spiroplasma Infection Rates in Monarch and Queen Butterflies*
Kristen Brehm, Isabel Laiseca-Ruiz, & Jamie Thompson
- Comparison of Symptom Interference of Quality of Life in Post-Radiation Treatment Early Stage vs. Late Stage Laryngeal Cancer Patients*
Luke Cooksey & Katie Preston
- Phylogeny of rodent genus Thomasomys based on the mitochondrial cytochrome c oxidase subunit I gene*
Jeremy Aymard, Cody Bly, Andrea Saenz, & Samantha Studvick
- Future Habitat Niches of Thomasomys and Rhipidomys (Rodentia: Cricetidae)*
Paris Webb & Amy Grotjohn
- Baseline survey of small mammals and bacterial pathogens in the southeastern Rolling Plains*
Hannah Seah & Daisy Gomez
- Estimating Climate-Based Range Expansion in Prosopis glandulosa (Honey Mesquite)*
William M. Keenan
- Infectious Disease Prevalence and Age of Feral Cat In a Population Living on the Abilene Christian University Campus*
Amanda McCormick
- Comparison of Microbial Communities Growing in Winogradsky and Diatomaceous Earth Columns*
Taylor Russell
- Protein Differences in First and Second Cutting Sorghum Hay Harvested in West Central Texas*
Ryan Pleasant
- Development of a new nuclear marker for phylogeny reconstruction in Thomasomys (Rodentia: Cricetidae)*
Paulina Sanchez, Maya Feller, Katherine Lawrence, & Jessica James
- Retrofitting a Manually-Operated Scanning Monochromator with a Computer-Controllable Stepper Motor*
Candace Brooks
- Biometrics and Psychometrics in Yahoo! Data*
Christy Duke

Poster Session II: Hunter Welcome Center Atrium

- Gender and Double Standards in Easy A*
Kimberly Martinez
- Who's He Tweeting?: Attachment and Jealousy on Social Media*
Kylie Richter, Brandon Clements, Alexandra Gartley, & Brie Hawkins
- Child Life Specialist Impact on Family Stress Resilience: A Parent's Perspective*
Julia Prior & Katie Bell
- Public Perception of SNAP Benefits: Implications for Policy and Practice*
Chelsea Fordham
- Engagement and Productivity in Gendered and Non-Gendered Toys in Girls Ages 8-11*
Claire Tyrrell & Bree Foster
- Typecasting of Women in the Action Film Genre*
Erika Thrasher, Emily Studer, & Stephanie Jordan
- The Role of Histone Deacetylase 3 in Diffuse Large B Cell Lymphoma*
Tina Johnson
- The Role of Chronology in Analyzing Introductory Programming Assignments*
Kayla Holcomb
- Residual ATNR May Affect Functional Movements in Children in an Additive or Synergistic Manner*
Jaci Williams, Emily Sorrells, Elena Taylor, Megan Hobby, Bailee Burns, & Chelsie Stefan
- Bobwhite Quail and Montezuma Quail Territory Change*
Christian Hofsommer
- Phylogeny of rodent genus Thomasomys based on the mitochondrial cytochrome b gene*
John Iragena, Kathryn Mitchell, Jacob Nelson, & Mark Wenzel
- Anaerobic Sequencing Batch Reactor*
William Head
- Osmium Carbonyl Clusters with Iodine Atoms*
James Johnstone
- The Roundabout Way to Deal with Traffic*
Audrey Kinzinger & Faith Moore
- Variation in the cytochrome c oxidase subunit I gene among populations of Tadarida brasiliensis*
Kimberly Burt, Alyssa Wilder, Charity Weaver, & Michael Ramirez
- Phylogeny of rodent genus Thomasomys (Rodentia: Cricetidae) based on the nuclear gene recombination activating gene 1*
Amberly Grothe, Cheyenne Cagle, & Marissa C. Home
- Analyzing the use of Financial Derivatives to Manage Price Risk for Cattle Feeding Operations*
Kevin Coburn & Brody Bengé
- The Effect of Environmental Stress on Canine (Canis familiaris) Glucocorticoid Levels in Boarding Kennels Versus Domicile Conditions*
Anna Curby
- Tests of phylogenetic hypotheses in Mentzelia section Bicuspidaria (Loasaceae) using the nuclear ITS and ETS regions*
Daisy Gomez & Caleb M. Rhodes
- Excavation and Restoration of Tylosaurus Skull*
Hannah Seah
- Differences in Habitat Niches of Two Haplotypes of the Species Mentzelia birsutissima (Loasaceae)*
Alexandria Giles & Brandi Prado
- Characterization of Cytochrome p450 Genes in the Horn Fly, Haematobia irritans, Using Molecular Cloning*
Maedgen Lindsey, Nathan Dougherty, & James Nix

AFTERNOON SESSIONS

Tuesday, April 5, 3:00 – 4:20 PM

Tuesday, April 5, 1:30 – 2:50 PM

Session C1: International Issues - McCaleb Room Zone A

The Growth and Development of Scottish Nationalism and the Desire for Independence Since the 1950s

Kirby Lemon

Australian Aborigines

Deanna Tuttle

Community-based Social Work in Haiti: Reunifying Homeless Families

Brie Heinrich

Tracking Sanctions Relief: How Iran spends 100 Billion

Sion Alford

Mexico's Battle Against the Drug Trafficking and Culture

Itzel Garcia De Alba

Session C2: Chemistry, Biochemistry, and Physics Research – McCaleb Zone B

Teaching Introductory Physics through Visual Computational Models

Vicente Rojas

Observing a binary black-hole merger in a matched-filter search

Hannah Hamilton

In Vitro synthesis of mvaE and mvaS in Expression Vector pDUET

Chandler Graf & Amanda McCormick

The Role of H2A.Z During the Oxidative Stress Response in Yeast

Julia Taylor & Kelsie Roberts

Oxidation of Hydrated Hydrogen Sulfide

Sarah Floris

Session C3. Nursing and Health Focus - Alumni Conference Room

What You Know and What You Do: The Energy Drink Enigma

Bethany Miracle, Katherine Hager, & Marquita Bugg

Stethoscopes: Instruments of Inspection or Instruments of Infection?

Amy Pinegar, Katherine Conder, & Mykayla Gunderson

Electronic Medical Record's Influence on Health Care Providers

Jessica Ragan, Sherdan Waugh, & Jacque Diaz

The Possible Health Effects of 12-hour Shifts On Nurses

Megan Styskal & Melanie Chavarria

Elucidating the Mechanism of Cadaverine in the Nitrosative Stress Response of Uropathogenic Escherichia coli

Kristen Clemons

Session C4: Theater, Film, and Television - LYNAY Classroom

Happily Ever After is a Choice: A Rhetorical Analysis of Once Upon A Time

Abby Altom

Did We Connect?

Laura Harris

Hands on a Hardbody Dramaturgy

Andrew Bullard

Morality and the Horror Film: Towards a Greater Understanding of the Problem of Evil

James Churchill

Beyond Catharsis: How Theatre Can Affect Real Change

Andrew Gilliland & Alyssa Saenz

Session D1: Mental and Physical Health - McCaleb Room Zone A

An Underserved Population: Rural Mental Health Needs in West Texas

Emily Turner, Alex Lim, Vivian Teoh, Mandy Campos, Megan Verette, & Cassie Dennis

The Personality Spectrum Analysis

Caroline Frey, Allison Kuster, Madison Houston, Destiny Eaton, Blair Davis, Peggy Speetzen, & Daniel Martin

Love is a Battlefield: Experience of Love and Depression

Laura Hill

Hospital Billing: Who Pays The Most? A Comparison of Hospital Billing Between Public and Private Insured Patients

Nia Tyler

Effects of Fatigue on the Cognitive-Linguistic Features of a Person with TBI

Ashley Raybon

Session D2: Contemporary Communication - Alumni Conference Room

Twitter and Islamic State: Communication Networks and the Rise of Terror States in the Middle East

Grace Rosa, Nick Cartwright, & Kevin Shurtz

Poldark

Kimberly Hauser

The Curious Case of Texas' Third Party Privilege

Allison Brown

Perceptions of Crime Seriousness

Amanda Stephens

Session D4: Investigating Plants and Animals - AT&T Theater

Phylogenetic relationships and patterns of homoplasy in Mentzelia section

Bicuspidaria (Loasaceae)

Denise Naude, Christian Hofsommer, Stephanie Sariles, & Gabriela Simonsen

Relationships between small mammal assemblages and land management in the southeastern Rolling Plains

Catherine Longest, Jamie Thompson, Daisy Gomez, Leneka Hagins, Nathan Neill, Reece Wells, & James Nix

To Vaccinate Or Not To Vaccinate: Discouraging Factors for Pet Owners

Taking Their Pets to the Veterinarian for Vaccinations

Ingrid Rojas

Evaluating the Effectiveness of Prostaglandin Injections and Artificial

Lighting in Stimulating Off Season Cycling in Mares

Sara Bishop

Tuesday, April 5, 5:30 – 6:30 PM

Awards Dinner in the McCaleb Conference Room Zone C

A special thanks to...

...the co-sponsors of the Undergraduate Research Festival

The Honors College
The Graduate School

...the Director of Undergraduate Research

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...the Student Worker for the Office of Undergraduate Research

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Suzie Macaluso
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Lynette Austin
Cliff Barbarick
Carisse Berryhill
Dale Bertram
Ed Brokaw
Clint Buck
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33

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10

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