



**MURRAY STATE**  
UNIVERSITY

**Steeplechase: An ORCA Student  
Journal**

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July 2024

## **ORCA Annual Report 2023-24**

MSU ORCA

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# **Office of Research and Creative Activity**

## **Annual Report 2023-24**



# Office of Research and Creative Activity

## Annual Report 2023-24

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# Contacts

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## Advisory Board Members 2023-24

Arthur J. Bauernfeind College of Business

- Dr. Ismail Karabas, Dept. of Management, Marketing, and Business Administration
- Dr. Melony Shemberger, Dept. of Journalism & Mass Communication

College of Education and Human Services

- Dr. Andrea Willson, Dept. of Early Childhood and Elementary Education
- Dr. Miguel Gomez, Dept. of Adolescent, Career, and Special Education

College of Humanities & Fine Arts

- Dr. Sean Rife, Dept. of Psychology
- Mr. T. Michael Martin, Dept. of Art and Design

Hutson School of Agriculture

- Dr. Trent Wells, Dept. of Agricultural Sciences
- Dr. Jeffrey Young, Dept. of Agricultural Sciences

Jesse D. Jones College of Science, Engineering & Technology

- Dr. Rupkatha Bardhan, Dept. of Occupational Safety and Health
- Dr. Christopher Trzepacz, Dept. of Cell and Molecular Biology

School of Nursing and Health Professions

- Dr. Kelly L. Taylor, Dept. of Occupational Therapy

University Libraries

- Mrs. Dana Thompson, Associate Dean

## 22<sup>nd</sup> Annual Posters-at-the-Capitol

Murray State University coordinated the statewide *Posters-at-the-Capitol* program on March 7, 2024. All Kentucky public universities participated. The program, emceed by **MSU Provost Dr. Tim Todd**, featured remarks from **KY CPE Vice President for Academic Affairs and Student Success Dr. Melissa Bell**, **Senator Brandon Storm**, and **Representative Mary Beth Imes**.



### College of Education and Human Services

- *Adult, Career, and Special Education*
  - Students: Clint Reardon Jr
  - Faculty Mentors: Dr. Miguel Gomez
- *Psychology*
  - Students: Kaid Marek
  - Faculty Mentors: Dr. Amanda Joyce, Dr. Tracey Garcia McCue

### College of Humanities and Fine Arts

- *Global Languages and Theatre Arts*
  - Students: Erin Fairweather
  - Faculty Mentors: Dr. Robert (Moses) Fritz

### Hutson School of Agriculture

- *Agriculture Science*
  - Students: Ava Isaacs, Emily Marsh
  - Faculty Mentors: Dr. Ilin Handayani, Dr. Megan Taylor

### Jesse D. Jones College of Science, Engineering & Technology

- *Biological Sciences*
  - Students: Claire Whitaker
  - Faculty Mentors: Dr. Christopher Lennon
- *Chemistry*
  - Students: Johnnie J. Perry, Jusdin Wayne Kamuf
  - Faculty Mentors: Dr. Timothy Spier, Dr. Bikram Subedi, and Dr. Wafaa Fawzy
- *Institute of Engineering*
  - Students: Ezekiel Houston Rafferty, Marianna Andia Karanja, Spencer Bugg, and William Riley
  - Faculty Mentors: Dr. Aleck Leedy, Abdulrahman Yarali

All projects available at <https://digitalcommons.murraystate.edu/postersatthecapitol/2024/Murray/>



# Fall & Spring Scholars Week 2023-24

Scholars Week events took place in Waterfield Library, the Curris Center, and other locations on campus and online. Students delivered 264+ presentations with the help of 100+ faculty mentors.

## 6<sup>th</sup> Annual Fall Scholars Week

November 13-17, 2023

Total Number of Events/Panels Included: **10**

Total Number of Presentations Reported: **103+**

Total Number of Individual Faculty Mentors Listed: **31**

Total Number of Individual Students Listed: **139**

Arthur J. Bauernfeind College of Business

- Sports Media

College of Humanities & Fine Arts

- BFA Shows
- Psychology Dept Presentations
  - In-Progress Projects
  - Completed Projects

Hutson School of Agriculture

- Soils and Sustainability (Handayani)

Jesse D. Jones College of Science, Engineering & Technology

- Advanced Ecology Symposium (Whiteman)
- Earth and Environment Sciences Poster Session (Zhang)

School of Nursing and Health Professions

- Senior Nursing Poster Session (Virtual)

Honors College

- Senior Thesis Presentations

Phi Kappa Phi

- "Love of Learning" Symposium

## 22<sup>nd</sup> Annual Spring Scholars Week

April 15-19, 2024

Total Number of Events/Panels Included:

Total Number of Individual Reported: **161+**

Total Number of Individual Faculty Mentors Listed: **69**

Total Number of Individual Students Listed: **189**

College of Humanities & Fine Arts

- Global Languages Senior Colloquium
- Political Science and Sociology Panel
- Psychology Department Showcase: Completed Projects
- Psychology Department Showcase: Projects In-Progress
- Spring 2024 Art & Design Senior Capstone Exhibitions

Jesse D. Jones College of Science, Engineering & Technology

- Sigma Xi Poster Competition
- Watershed Studies Institute Research Symposium

School of Nursing and Health Professions

- Senior Nursing Poster Session (Virtual)

Honors College

- Senior Thesis Presentations

Phi Kappa Phi

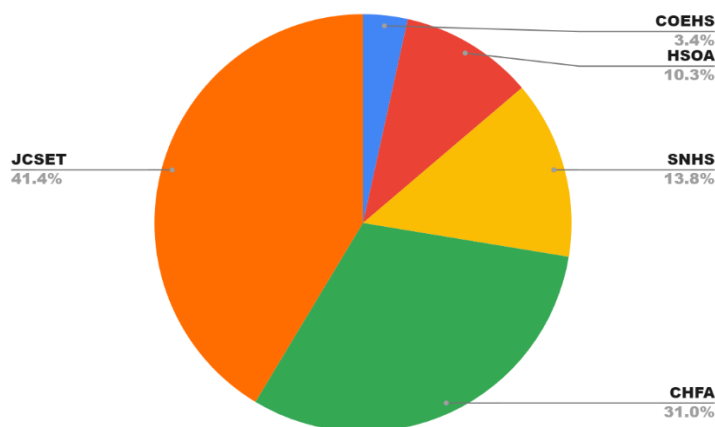
- "Love of Learning" Symposium

## Research & Travel Grants

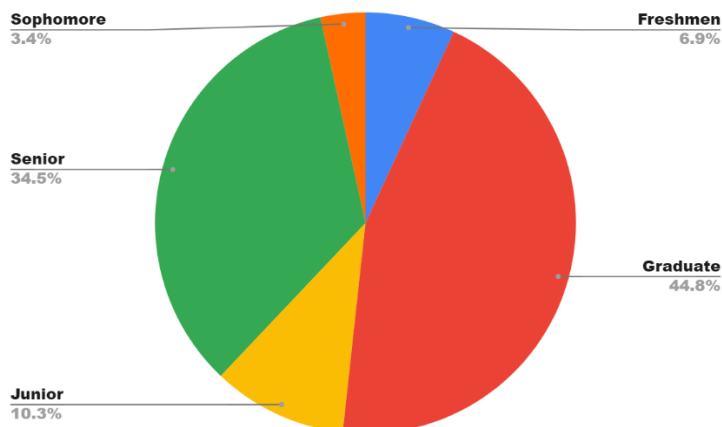
ORCA has a modest amount of funds available to assist faculty-mentored, student research projects **or** to assist students in support of travel to present, perform, or exhibit their faculty-mentored research or creative activity at off-campus professional conferences or gatherings. Research Grants are vetted by the full ORCA Advisory Board whereas Travel Grants are awarded based upon receipt of conference acceptance notification for the student and remaining funds.

Total Number of Grants Awarded:	<b>28</b> (15 in 22-23)
Total Number of Students Covered:	<b>37</b> (20 in 22-23)
Total Number of Individual Faculty Mentors:	<b>21</b> (17 in 22-23)
Total Amount Awarded:	<b>\$21,044</b> (\$15,485 in 22-23)

**AREA OF GRANTEES**



**CLASSIFICATION OF GRANTEES**



## ORCA Research & Travel Awarded Projects, 2023-24

Project Title	First Author	
<a href="#"><u>Assessing mesopredator foraging habits in response to an extirpated and extant predator</u></a>	Evan	Lemons
<a href="#"><u>Assessing the interaction of stress physiology and Bd infection in Arizona tiger salamanders (<i>Ambystoma mavortium nebulosum</i>)</u></a>	Megan	Zerger
<a href="#"><u>Pedro Mexía and the Politics of Translation in the Early Modern World</u></a>	Erin	Fairweather
<a href="#"><u>Does Self-Esteem and Gender Attitudes Affect Sexual Prejudice Among Young Adults?</u></a>	Kaid	Marek
<a href="#"><u>Memories of Home and Family</u></a>	Hannah	Eriksen
<a href="#"><u>When Cooking Sous Vide, Do Different Bags Change the Color Reading of the Spectrophotometer?</u></a>	Kathryn	Beard
<a href="#"><u>The Use of Laja in Construction in Ancient Mesoamerica, a View From the Southern Gulf Lowlands of Veracruz, Mexico</u></a>	Lauren	Smith
<a href="#"><u>Breaking Traditional Rules in Photography: Rural Landscapes in Western Kentucky</u></a>	Beth	Bailey
<a href="#"><u>Performance at the National Trumpet Competition</u></a>	Eric	Swisher
<a href="#"><u>KAPSCon2023, presenting poster (Enhancing First-Grade Math Fluency: A Multi-Tiered Intervention Approach)</u></a>	Kiah	Goettlich
<a href="#"><u>Impact of Horse Experience Level on Assessment of Equine Personality</u></a>	Savannah	Rivers
<a href="#"><u>Assessing the health and behavioral effects of turtle racing on eastern box turtles (<i>Terrapene carolina</i>)</u></a>	Michelle	Weaver
<a href="#"><u>Assessing mesopredator foraging habits in response to an extirpated and extant predator</u></a>	Evan	Lemons
<a href="#"><u>Does Climate Change Promote Cannibalism?</u></a>	Melissa	Ocampo
<a href="#"><u>Assessing the interaction of stress physiology and Bd infection in Arizona tiger salamanders</u></a>	Megan	Zerger



Project Title	First Author	
<a href="#"><u>The effects of climate extremes on greenhouse gas emissions from Bald cypress “knees”</u></a>	Skylar	Ross
<a href="#"><u>The Relationship Between Hydrogeomorphic Settings and Greenhouse Gas Emissions from Soils and Stems in Western Kentucky’s Bottomland Hardwood Forests</u></a>	Marissa	Miles
<a href="#"><u>Improving Hypertension through the use of a Home Monitoring System</u></a>	Christy	Sims
<a href="#"><u>Home Blood Pressure Monitoring</u></a>	Jeanette	Paris
<a href="#"><u>Management of Hypertension in Adult Patients in the Primary Care Setting Quality Improvement Project</u></a>	Makaela	Breithaupt
<a href="#"><u>Sport fan preferences</u></a>	Callie	Hart
<a href="#"><u>Association Between Impulsivity and Positive Expectations of Marijuana</u></a>	Clare	Uhlik
<a href="#"><u>Dark Times in Dark Academia: Exploring the Queering of Identity in the Genre Obstructed by Tragedy</u></a>	Hayden	Eubanks
<a href="#"><u>Marching to the Music: The U.S. Military’s Impact on American Youth through the Marching Band Movement, 1910-1990</u></a>	Elise	Eaton
<a href="#"><u>Evaluation of electrode geometries for portable trapped ion mobility spectrometry</u></a>	Riley	Patterson
<a href="#"><u>Can altering the distribution of organic matter in wetlands soils change methane emissions?</u></a>	Isaiah	Radford
<a href="#"><u>Synthesis and Properties of 3D Printable Resins</u></a>	Cameron	Woods
<a href="#"><u>THE EFFECTS OF CITRULLINE MALATE</u></a>	Macy	Bynum
<a href="#"><u>What Factors Influence Undergraduate Agricultural Education Students’ Perceptions of their Academic Major?</u></a>	Emma	Wiseman

# Steeplechase: An ORCA Student Journal

Volume 7, Issue 1 (2023) Fall 2023 / Spring 2024

- **Editor's Letter**  
[ORCA Annual Report 2022-23](#)

## ORCA Travel Grant Spotlights

- [Enhancing First-Grade Math Fluency: A Multi-Tiered Intervention Approach](#)  
*Kiah Goettlich and Sean Simmons Ph.D.*
- [Students' Participation in Society for Photographic Education Midwest Conference](#)  
*Abbie Michalek and Cintia Segovia Figueroa*
- [Dark Times In Dark Academia](#)  
*Hayden Eubanks*
- [Assessing the health and behavioral effects of turtle racing on eastern box turtles \(\*Terrapene carolina\*\)](#)  
*Michelle Weaver and Andrea Darracq*
- [THE EFFECTS OF CITRULLINE MALATE ON MULTIPLE BOUT, HIGH-INTENSITY AEROBIC EXERCISE: A PILOT STUDY](#)  
*Macy Kate Bynum, Annika Marie Pschorr, Taylor Carrico, Morgan Maleske, Matthew Hermes, and Brenda Reeves*
- [Interwar Patriotism: From Military Bands to Marching Bands, 1920s and 1930s](#)  
*Elise Eaton*
- [Bald Cypress "Knees" Contribute to Methane Emissions in a Bottomland Hardwood Wetland](#)  
*Skylar Ross*
- [Handler Experience and Horse Personality Assessment](#)  
*Savannah Rivers and Shea Porr*

## ORCA Research Grant Spotlights

- [Childhood Experiences and Obesity in Adulthood](#)  
*Hannah Eriksen and Esther Malm*
- [College Women's Traditional Attitudes towards Femininity and Homonegativity](#)  
*Kaid Marek and Amanda Watson Joyce*
- [When Cooking Sous Vide, Do Different Bags Change the Color Reading of the Spectrophotometer?](#)  
*Kathryn Beard and Thomas Powell*

## Undergraduate Theses

- [The Disconnect between General Classroom Teaching Techniques and English Language Learner Needs](#)  
*Marliese Belt*
- [The Use of Laja in Construction in Ancient Mesoamerica](#)  
*Lauren E. Smith*

## Undergraduate Research

- [Increased Feminine Self-Concept in Men Corresponds With Less Homonegativity](#)  
*Kaid M. Marek, Amanda Watson Joyce, and Tracey A. Garcia McCue*

# University Distinguished Mentor Award

ORCA continues the tradition of presenting Murray State University's 18<sup>th</sup> annual University Distinguished Mentor Award (UDMA) in conjunction with the Office of the Provost. UDMA recognizes extraordinary efforts of Murray State faculty in the area of undergraduate and graduate student mentoring: a sustained partnership of mutual concern significantly fostering students' intellectual, ethical and academic development above and beyond expectations of even excellent advising and teaching.

## UDMA 2024 Recipient

Dr. Elizabeth Donovan, Mathematics and Statistics



## Award Chair

Dr. Amanda Joyce

## Selection Committee Members

Arthur J. Bauernfeind College of Business

- Dr. Brian Perna

College of Education and Human Services

- Dr. Donna Crouch

College of Humanities & Fine Arts

- Dr. Jie Wu

Hutson School of Agriculture

- Dr. Brian Parr

Jesse D. Jones College of Science, Engineering & Technology

- Dr. Michael Flinn

School of Nursing and Health Professions

- Nancy Armstrong, RN, DNP

University Libraries

- Mrs. Megan Wilson

Previous Recipient Serving on Committee

- Dr. Ilin Handayani

# **Info and Dates-to-Know for 2024-25**

## **Research & Travel Grants**

Begin accepting applications August 19, 2024 (open until funds deplete)

Research Grants maximum \$1,000

Travel Grants maximum \$800

## **Fall Scholars Week 2024**

Event Dates: November 11-15, 2024

Abstract Submission Deadline: November 1, 2024

## **Spring Scholars Week 2025**

Event Dates: April 14-18, 2025

Abstract Submission Deadline: April 4, 2025

## **Posters-at-the-Capitol 2025**

Event Dates: March 6, 2025

Abstract Submission Deadline: December 9, 2024

Acceptance/Regrets delivered: (no later than) January 17, 2025

## **University Distinguished Mentor Award**

Nomination Deadline: January 24, 2025

Deadline for Nominees to Submit Information: February 7, 2025

Award presented at Faculty Recognition Banquet – April 17, 2025

**Find more information about these programs at [murraystate.edu/ORCA](https://murraystate.edu/ORCA)**