Student as Scholar
THE 29TH ANNUAL UNDERGRADUATE RESEARCH FORUM
APRIL 19, 2023
Welcome to the 2023 Undergraduate Research Forum — a celebration of inquiry, creativity, and knowledge creation — hallmarks of the Miami University Experience. For 29 consecutive years, this forum has highlighted our faculty and students using research to extend the Miami University classroom education into laboratories, fieldwork, and into our surrounding communities. Through analyzing data, designing studies to advance scholarship, and presenting results, Miami students demonstrate skills that are essential to success in today’s global and interconnected world. The annual Undergraduate Research Forum is an incredible showcase of Miami’s student-as-scholar model.

This year, we celebrate the return to an in person event, showcasing 196 presentations by 345 undergraduate researchers, mentored by 98 faculty. Our sincere gratitude goes out to the faculty mentors who guide this undergraduate experience — an experience that has differentiated Miami University for generations. In addition to these faculty, we also proudly recognize the 34 graduate student mentors who play significant roles in these research projects. Likewise, thank you to the students, faculty and staff whose participation makes this annual forum a success.

During the 2021-22 academic year, approximately 3,000 Miami students worked with professors/mentors on funded research. Additionally, Miami recorded over 14,000 enrollments in courses that include research experiences. We believe in the power of scholarly research to enhance the student experience and change the world; and we join with you in congratulating everyone involved in this celebration of inquiry and discovery.

Love and Honor,

Gregory P. Crawford Ph.D.
President

TABLE OF CONTENTS

Shriver Center Map and Sponsors ................................................................. 4
Schedule of Events ...................................................................................... 5
Featured Exhibit “Telling Your Research Story” [Shriver Lobby] ...................... 5
Buffet Luncheon [Heritage Room] ................................................................. 5
Announcement of LAURE Award Winners .................................................. 5
Panel Discussion: “Beyond Undergraduate Research — From Imagination to Impact” .................................................................................. 5
Ten-minute Oral Presentations concurrent sessions .................................. 10
Session I 9:30-10:30 a.m. ........................................................................... 10
Session II 10:45-11:45 a.m. ...................................................................... 11
Session III 11:15-12:15 p.m. ................................................................. 11
Session IV 2:30-3:30 p.m. ........................................................................ 12
Large Format Poster Sessions and Showcase of Miami Centers ............... 13
Session A 9:00-10:30 a.m. ....................................................................... 13
Session B 1:00-2:00 p.m. ......................................................................... 18
Session C 3:00-4:30 p.m. .......................................................................... 23
Letter from Associate Provost and Dean of Undergraduate Education .... 28
Mentors Listing by department ................................................................. 29
Letter from Director Office of Research for Undergraduates (ORU) .... 31
Council on Undergraduate Research Enhanced Membership thru ORU ... 32
Undergraduate Research Opportunities .................................................... 33
Doctoral-Undergraduate Opportunities for Scholarship (DUOS) .......... 33
First Year Research Experience (FYRE) .................................................. 33
Undergraduate Research Award (URA) ...................................................... 33
Undergraduate Summer Scholars (USS) ................................................... 34
Miami University Library Award for Undergraduate Research Excellence (LAURE) ........................................................... 34
National Fellowships Global Initiatives ..................................................... 34
Miami Colleges and Departments offer opportunities for Inquiry-based learning ............................................................ 35
Acknowledgments ..................................................................................... 36
Presenters Index Last Name First .............................................................. 37
Letter from Dean and University Librarian .............................................. 46
MORNING

Featured Exhibit: “Telling Your Research Story” Shriver Center Foyer in front of JDOL
A collaboration with University Communications & Marketing
Miami University Centers and Research Support Showcase John Dolibois Rooms

Presentations
Large Format Poster Sessions [90-minutes] Shriver 2nd Floor
Session A 9:00 – 10:30 a.m. John Dolibois Rooms

Ten-minute Oral Presentations [concurrent sessions] Shriver 3rd Floor
Session I 9:30 – 10:30 a.m. Caroline Scott Bystrom Reid
Session II 10:45 – 11:45 a.m. Caroline Scott Bystrom Reid

Panel Discussion: “Telling Your Research Story”, Moderated by Provost Elizabeth Mullinex and Associate Dean for Undergraduate Research, Amy Bergerson
11:00 – 11:45 a.m. Heritage Room Shriver 3rd Floor

Luncheon (Registration Required)
11:45 a.m. – 1:15 p.m. Heritage Room Shriver 3rd Floor

Library Award for Undergraduate Research Excellence [LAURE] to be Presented by Dr. Renate Crawford
Noon – 12:15 p.m. Heritage Room Shriver 3rd Floor

Panel Discussion: “Beyond Undergraduate Research — From Imagination to Impact” A collaboration with the Office for ASPIRE — Advancing strategy, partnerships, institutional relations, and economy.
12:15 – 1:15 p.m. Heritage Room Shriver 3rd Floor

AFTERNOON

Featured Exhibit: “Telling Your Research Story” Shriver Center Foyer in front of JDOL
Miami University Centers and Research Support Showcase John Dolibois Rooms

Presentations
Large Format Poster Sessions [90-minutes] Shriver 2nd Floor
Session B 1:00 – 2:30 p.m. John Dolibois Rooms
Session C 2:30 – 4:30 p.m. John Dolibois Rooms

Ten-minute Oral Presentations [concurrent sessions] Shriver 3rd Floor
Session III 1:15 – 2:15 p.m. Caroline Scott Bystrom Reid
Session IV 2:30 – 3:30 p.m. Caroline Scott Bystrom Reid
### UNIVERSITY CENTERS AND RESEARCH SUPPORT SHOWCASE

**Wednesday, April 19, 2023**  
Shriver Center John Dolibois Rooms (JDOL)

<table>
<thead>
<tr>
<th>CENTER AND CONTACT DETAILS</th>
<th>DESCRIPTION</th>
<th>SESSION TIMES</th>
</tr>
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| Cecilia Berg Center for Environmental Education  
Julia Robinson  
director@MiamiOH.edu  
phone: 513-529-4618 | The Cecilia Berg Center for Environmental Education is a comprehensive natural science education resource that enables learners of all disciplines — from preschoolers to university students to retirees — to understand their connections to the natural world in age-appropriate ways. Through our classes, we train and certify undergraduates in the most current and innovative, inquiry-based educational methods and develop and host standards-based, turn-key curricula. In partnership with Hofner Museum of Natural History, we supply educational kits of authentic specimens, host tours, and lead experiential learning opportunities. | Session A 9 – 10:30 a.m.  
Session B 1 – 2:30 p.m.  
Session C 3 – 4:30 p.m. |
| Center for Advanced Microscopy and Imaging (CAMI)  
Zach Ostreicher  
director@MiamiOH.edu | CAMI is an all-university research, teaching, and service facility located in Upham Hall on Miami University’s main campus in Oxford, Ohio. CAMI serves the microscopy needs of both the biological and materials communities. CAMI is available for use without charge to the Miami University community. | Session A 9 – 10:30 a.m.  
Session B 1 – 2:30 p.m. |
| Center for Analytics & Data Science (CADS)  
David Scoville  
director@MiamiOH.edu | Center for Analytics and Data Science provides an innovative environment where students and faculty can embrace the application of analytics and data science; engage in research that transforms the practice of analytics and data science; receive support in developing their skills; and find opportunities to elevate their understanding through research, coursework, collaboration, and experiential learning. | Session B 1 – 2:30 p.m. |
| Center for Bioinformatics & Functional Genomics  
Andor Kiss  
CBFG@MiamiOH.edu | Center for Bioinformatics and Functional Genomics (CBFG) is a state-of-the-art research and training facility available for all members of Miami University, with the goal of advancing research opportunities for faculty, post-doctoral fellows, graduate students, and undergraduates in all fields that intersect in molecular biology and big data bioinformatics. The CBFG employs full-time staff, who are available for training, operation, and maintenance of the Center’s equipment, which includes an Illumina Miseq, ONT minION, an Applied Biosystems capillary DNA sequencer, an ephoton 5073m liquid handling robot, qPCR thermocyclers, ancillary equipment to prepare NGS libraries, and several high-capacity Linux computer workstations for bioinformatic and other big data analyses. | Session A 9 – 10:30 a.m. |

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| Center for Neuroscience and Behavior  
Anna Radke  
aradke@MiamiOH.edu | Miami University’s Center for Neuroscience and Behavior is an interdisciplinary research center with a mission to promote neuroscience research as well as to train graduate and undergraduate students for a career in developmental, cellular, molecular, and/or behavioral neuroscience. | Session A 9 – 10:30 a.m.  
Session B 1 – 2:30 p.m.  
Session C 3 – 4:30 p.m. |
| Center for School-Based Mental Health Programs  
Kyle Bush  
asociate director@MiamiOH.edu  
Debra Robison  
Project Administrator | The Center for School-Based Mental Health Programs (CSBMHP) in the Psychology department University is committed to connecting applied research, pre-service education of future clinicians, in-service training of educators and mental health professionals, and direct clinical and consultative service to school districts and community partners. | Session A 9 – 10:30 a.m. |
| Center for the Study and Support of Children and Families of the Incarcerated (CSSCFI)  
Yvette Harris  
director@MiamiOH.edu  
Abiola Lawal  
Emily Longville | The Center for the Study and Support of Children and Families of the Incarcerated (CSSCFI) in the Department of Psychology at Miami University is committed to solution-focused research, practice, and pedagogy that can have a substantial impact on the lives and well-being of returning citizens and their children and families. | Session B 1 – 2:30 p.m. |
| Doris Bergen Center for Human Development, Learning, & Technology (CHDLT)  
Co-directors: Chris Wolfe  
thefacst@MiamiOH.edu  
Kevin Bush  
Chris Gatter | The Doris Bergen Center for Human Development, Learning, and Teaching promotes interdisciplinary research, information dissemination, and in-service training to enhance the education, adjustment, and well-being of at-risk children, youth, and families. | Session A 9 – 10:30 a.m. |
## University Centers and Research Support Showcase

Wednesday, April 19, 2023  
Shriver Center John Dolibois Rooms (JDOL)

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| **Geospatial Analysis Center**  
MUGAC@MiamiOH.edu  
Robyn Abbitt  
abittrj@miamioh.edu | The Geospatial Analysis Center (GAC) serves as a hub of geospatial research and activities in support of education, research, and outreach activities. The Center provides geospatial data and analysis support (including access to licensed geospatial software and GIS data) to individual students, faculty, and university administrators, as well as consultations to external partners. | Session A 9 – 10:30 a.m.  
Session B 1 – 2:30 p.m.  
Session C 3 – 4:30 p.m. |
| **Global Health Research Innovation Center: The R-silience Project**  
Cameron Hay-Rollins  
hayrolmc@MiamiOH.edu | The Global Health Research Innovation Center (GHRIC) facilitates interdisciplinary faculty research and alumni engagement, creating opportunities for student research involvement and enriching the teaching in the Global Health minor. R-silience is one example of our work. Funded by ODHE, the R-silience team includes 3 faculty (Michael Bailey-Van Kuren, Tim Greenlee, Chris Sutter), 52 undergraduates, and partnerships with other faculty (Christy Carr), administrators (Brian Furnish, Randi Thomas, Christopher Lawson), and community members (Beth Bullock, Abbe Lackmeyer, Michelle Lydenberg, Erica Parks, Tyler Schmidt), working to improve equity for those in substance use recovery. | Session A 9 – 10:30 a.m.  
Session B 1 – 2:30 p.m.  
Session C 3 – 4:30 p.m. |
| **Global Initiatives — Global Readiness Certificate Program**  
Alicia Castillo Shrestha  
Coordinator  
alicia@MiamiOH.edu  
shrestac@MiamiOH.edu | The Global Readiness Certificate is an innovative credential at Miami in that it combines coursework with co-curricular experiences, community engagement and education abroad into a unique and diverse learning environment for students. Miami Regionals and the College of Liberal Arts and Applied Science houses 12 academic departments and a variety of associate and bachelor’s degrees that can be completed in their entirety in Middletown, Hamilton, the Voice of America Learning Center, or online. Although students commute to campus, the Global Readiness Certificate promises to enhance a sense of community and belonging. | Session A 9 – 10:30 a.m.  
Session B 1 – 2:30 p.m. |
| **Global Initiatives National Fellowships**  
Karla Guirigundo  
Director of Global Partnerships | The Miami website lists current fellowships and scholarships which require an institutional endorsement. Links to each specific fellowship’s website are provided as well as a brief overview of requirements. Detailed information for each fellowship is provided on their linked website. | Session A 9 – 10:30 a.m.  
Session B 1 – 2:30 p.m.  
Session C 3 – 4:30 p.m. |
| **Graduate School**  
Amity Notlemeyer  
Elise Radina  
Michael Crowder | The Graduate School at Miami University serves a community of students immersed in the heart of the Miami experience: interdisciplinary research and collaborative inquiry. Representing a full selection of master’s, doctoral, and certificate programs spanning various disciplines, the Graduate School serves as a platform for discovery, creativity, innovation, and collaboration. | Session A 9 – 10:30 a.m.  
Session B 1 – 2:30 p.m.  
Session C 3 – 4:30 p.m. |

### University Libraries

Details on research support services are provided on the website. These include: Ask a Librarian, Citation Resources, Research Workshops, and more.

### Scripps Gerontology Center/Department of Sociology and Gerontology

Scripps Gerontology Center is one of the nation’s top centers for research in aging and an Ohio Center of Excellence. The Center is committed to making a positive difference in the lives of aging individuals, their families and communities, and to meet the needs of aging societies. They accomplish this mission through excellence in research, education, and service.

### University Libraries

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| **University Libraries** | Details on research support services are provided on the website. These include: Ask a Librarian, Citation Resources, Research Workshops, and more. | Session A 9 – 10:30 a.m.  
Session B 1 – 2:30 p.m.  
Session C 3 – 4:30 p.m. |
| **Scripps Gerontology Center/Department of Sociology and Gerontology**  
Leah Janssen  
Assistant Director for Academic Programs and Research Support  
jansselm@MiamiOH.edu  
Shawn Vanness  
diabberasa@MiamiOH.edu | Scripps Gerontology Center is one of the nation’s top centers for research in aging and an Ohio Center of Excellence. The Center is committed to making a positive difference in the lives of aging individuals, their families and communities, and to meet the needs of aging societies. They accomplish this mission through excellence in research, education, and service. | Session B 1 – 2:30 p.m. |
TEN-MINUTE TALKS
Wednesday, April 19, 2023

Session I
Bystrom Room
9:30 – 10:30 a.m.

Session Moderators
Grace Brock, Department of Biology
Kathryn Aldstadt, Department of Psychology

Shakhzodkhon Mukaddassikhonov, Bioengineering Major
Gejla Toromani, Biology and Premedical Studies
Advisor(s): Khan Mahmud, Department of Physics
Sharmistha Bhattacharjee, Department of Physics
Ashika Bhatta, Department of Physics
Magnetic, Structural and Magnetocaloric Properties of Block Metals and Transition Metals’ Alloys for Self-Controlled Hyperthermia

Corrine Rogers, Geography and Environmental Science Major
Advisor(s): Marcia England, Department of Geography
Interpreting Anthropogenic Climate Change Action Through the Bible

Jackson Riffe, Biology and Premedical Studies Major
Advisor(s): Joyce Fernandes, Department of Biology
Neelchi Prashali, Department of Biology
Magnetic, Structural and Magnetocaloric Properties of Block Metals and Transition Metals’ Alloys for Self-Controlled Hyperthermia

Laila Haidar, Art & Architecture History, and Anthropology Major
Advisor(s): Anna Dall’Aria, Department of Art
Teresa Ries & “The Witch”: An Erased Icon of Early Feminist Art

Session II
Bystrom Room
10:45 – 11:45 a.m.

Session Moderators
Nancy Rotich, Department of Chemistry and Biochemistry
Kathryn Aldstadt, Department of Psychology

Alexa Draper, Physics and Mathematics Major
Ellison Brennan, Science Education Major
Advisor(s): Jennifer Blue, Department of Physics
Classroom Culture and Student Perceptions of Classes at Miami University

MARIE C (Merging All-girls Results in Education + Careers)
Lina Miesse, Environmental Earth Science Major
Ronald Henkel, Biology Major
Sofia do Valle Pereira Esteves, Biomedical Engineering
The Bright Future of Solar Panel Recycling

Julia Hatfield, Biology Major
Nataly Ovalle, Biology Major
Diseases Pertaining to the Hippocampus

Session III
Bystrom Room
1:15 – 2:15 p.m.

Session Moderators:
Kevin Morrison, Department of Chemistry and Biochemistry
Dormetria Robinson Thompson, Department of Educational Leadership

Eleanor Miller, Classical Humanities and History Major
Advisor(s): Denise McCoskey, Department of French, Italian, and Classical Studies
Power in the Myths of Medusa and Persephone: Case-Studies in Classical Reception

Gabriella Theodoroudis, Biology and Premedical Studies Major
Advisor(s): Kata Del Rio-Tsonis, Department of Biology
Sophia Ratvasky, Department of Biology
Characterizing the Lens Regeneration Process in P. waltl

James Darragh, Art Education Major
Advisor(s): Stephanie Danker, Department of Art
Experiencing Cultural Appreciation
Session IV

Bystrom Room
2:30 – 3:30 p.m.

Session Moderators:
Nancy Rotich, Department of Chemistry and Biochemistry
Gwendolyn Lloyd, Department of Biology
Maddie Weaver, Mechanical Engineering Major
Advisor(s): Jinjuan She, Department of Manufacturing and Mechanical Engineering
Team Diversity and Equal Contribution in Engineering Design Projects

Aliya Myers, Biology Major
Advisor(s): Jennifer Blue, Department of Physics
Imposter Syndrome in Undergraduate STEM Students

Henry Beckett, Psychology and Neuroscience Major
Advisor(s): Jennifer Quinn, Department of Psychology
A04 Imposter Syndrome in Undergraduate STEM Students

A05 Chanakya Pandya, Physics and Computer Science Major
Advisor(s): Samir Bali, Department of Physics
A06 Distinguishing Species-Specific Pollen Differences in Genus Vasconcellea of the Papaya Family

A07 Hareshvadhan Sanaka, Biology and Premedical Studies Major
Advisor(s): Katia Del Rio-Tonis, Department of Biology
A08 Kelsey Ellis, Department of Anthropology
Role of Hypoxia on Chick Retinal Pigment Epithelium Reprogramming

A02 Raynae Bingham, Psychology and Premedical Studies Major
Advisor(s): Rosa Marie Ward, Department of Psychology
Time to Be Real: From College Students’ Perceived Alcohol Use to Their Relationship With College Students’ Alcohol Behaviors

A03 Elke Wang, Psychology and Premedical Studies Major
Advisor(s): Rosa Marie Ward, Department of Psychology
A04 William Gregor, Biology Major
Advisor(s): Michael Moore, Department of Biology
A05 Kathleen Thompson, Biology and Premedical Studies Major
Advisor(s): Michael Moore, Department of Biology
A06 Joelle Rooth, Public Health and Premedical Studies Major
Advisor(s): Michael Moore, Department of Biology
A07 Kelsey Ellis, Department of Anthropology
A08 Elke Wang, Psychology and Premedical Studies Major
Advisor(s): Rosa Marie Ward, Department of Psychology
A09 Joelle Rooth, Public Health and Premedical Studies Major
Advisor(s): Michael Moore, Department of Biology
A10 Joelle Rooth, Public Health and Premedical Studies Major
Advisor(s): Michael Moore, Department of Biology

A08 Racial and Ethnic Disparities Regarding Food Stamp Usage in United States Households

A09 Abigail Meikle, Psychology and Premedical Studies Major
Advisor(s): Rosa Marie Ward, Department of Psychology
A10 Abigail Meikle, Psychology and Premedical Studies Major
Advisor(s): Rosa Marie Ward, Department of Psychology
A11 Abigail Meikle, Psychology and Premedical Studies Major
Advisor(s): Rosa Marie Ward, Department of Psychology

A02 Maya Nathan, Psychology and Premedical Studies Major
Advisor(s): Rosa Marie Ward, Department of Psychology
A03 Julia Razavi, Biology and Premedical Studies Major
Advisor(s): Rosa Marie Ward, Department of Psychology
A04 William Gregor, Biology Major
Advisor(s): Michael Moore, Department of Biology
A05 Kathleen Thompson, Biology and Premedical Studies Major
Advisor(s): Michael Moore, Department of Biology
A06 Joelle Rooth, Public Health and Premedical Studies Major
Advisor(s): Michael Moore, Department of Biology
A07 Kelsey Ellis, Department of Anthropology
A08 Elke Wang, Psychology and Premedical Studies Major
Advisor(s): Rosa Marie Ward, Department of Psychology
SESSION A 9:00 – 10:30 a.m. Wednesday, April 19, 2023 John Dolibois Room

A21  Natalie Shand, Psychology Major
Advisor(s): Anna Radke, Department of Psychology
Theresa Perry, Department of Psychology
Amygdala Interconnected Neuron Contributions to Alcohol Drinking Behavior

A22  Mary Durfee, Zoology and Premedical Studies Major
Delaine Lewis, Psychology Major
Kat Piku, Psychology Major
Nicolaus Bruns VI, Psychology and Biology Major
Advisor(s): Anna Radke, Department of Psychology
Impact of Nicotine and Alcohol Individually and Concurrently in ChAT-MOR Knockout Mice

A23  Chloe Thach, Public Health and Neuroscience Major
Advisor(s): Anna Radke, Department of Psychology
The Effects of Lead Exposure During Early Development on Fentanyl Addictive Behavior in Mice

A24  Katie Francis, Geography and Sustainable Development Major
Advisor(s): Marcia England, Department of Geography
Evaluation of Sustainability Practices within the Construction Industry in Cincinnati, OH

A25  Casidy Waidrop, Biology, Spanish and Neuroscience Major
Logan Novom, Speech Pathology & Audiology Major
Grace Runge, Biology and Data Analytics Major
Jack Mamone, Biology Major
Nicole Bauer, Psychology Major
Lindsay Kocher, Psychology Major
Ben Capella, Psychology Major
Claire Meyer, Psychology Major
Advisor(s): Robin Thomas, Department of Psychology
Aligning Statistics Teaching and Statistical Usage in Undergraduate Neuroscience Education

A26  Katie Oaks, Biology Major
Ian Collamer, Microbiology Major
Hayley Craycraft, Microbiology Major
Gunnar Frechette, Biology Major
Nick Hargett, Microbiology Major
Kavan Jackson, Microbiology Major
Lucy Jones, Microbiology Major
Myrida Lefk, Biology Major
Ava Loria, Biology Major
Meet Patel, Microbiology Major
Madelyn Soder, Biology Major
Liv Weintraut, Biology Major
Alex Wyckott, Zoology Major
Katya Rushe, Microbiology Major
Advisor(s): Mitchell Balish, Department of Microbiology
Rebecca Balish, Department of Microbiology
Rachael Morgan-Kiss, Department of Microbiology
Kristina Gara, Department of Microbiology
Elise Levenda, Department of Microbiology
Phase of Enlightenment: What Has Been Learned from the Isolation and Characterization of Bacteriophages of Microbacterium submarum and Streptomyces lividans

A27  Hunter Coon, Microbiology Major
Callie Owens, Microbiology Major
Advisor(s): Rachael Morgan-Kiss, Department of Microbiology
A Community Under Siege — Salinity Impact on Phycoresta Communes

A28  Connor Wasmund, Microbiology Major
Advisor(s): Rachael Morgan-Kiss, Department of Microbiology
Davon Popson, Department of Microbiology
The Impact of Elevated Salinity on Palmariao Formation and Disruption in Chlamydosomonas Species

A29  Ethan Finke, Biochemistry Major
Advisor(s): Rick Page, Department of Chemistry and Biochemistry
Characterization New Delhi Mutant Beta Lactamases

A30  Samantha Erne, Business Analytics Major
Jacob Holroyd, Business Analytics Major
Peter Walsh, Business Analytics and Finance Major
Brendan Beattie, Information Systems Major
Advisor(s): Fadel Megahed, Department of Information Systems and Analytics
NFL Injury Analysis

A31  Charles Schaeffer, Biology and Music Major
Advisor(s): Haier Shi, Department of Biology
Flora Xi, Department of Biology
Effects of Estragon and Glucose on Colorectal Cancer Cell Growth

A32  Glenn Ochsner, Physics and Mathematics Major
Advisor(s): Imran Mirza, Department of Physics
Sending Secure Information Using Quantum Cryptography

A33  Katie Caudill, Geology Major
Advisor(s): Claire McLeod, Department of Geology & Environmental Earth Science
Alek Gawronska, Department of Geology & Environmental Earth Science
Alex Schweitzer, Department of Geology & Environmental Earth Science
What Can Spleenites Tell Us About Geological Processes on the Moon and Mars?

A34  Dwight Sims, Geology Major
Advisor(s): Buchanan Kerswell, Department of Geology & Environmental Earth Science
Deformation of Dry High-pressure Eclлотges During Tectonic Sliding of Subducted Oceanic Lithosphere: A Case Study from the Monviso Ophiolite, Italy

A35  Cameron Morrison, Geology Major
Advisor(s): Buchanan Kerswell, Department of Geology & Environmental Earth Science
Comparing PT Paths of Metamorphic Rocks Determined by Quantitative and Semi-quantitative Approaches: A Case Study from the Monviso Ophiolite, Italy
SESSION A
9:00 – 10:30 a.m.

Wednesday, April 19, 2023
John Dolibois Room

A36 Lauryn Cook, Biochemistry and Public Health Major
Advisor(s): Gary Lorigan, Department of Chemistry and Biochemistry
Rebecca Stowe, Department of Chemistry and Biochemistry
Heart Membrane Proteins’ Misfunction Leads to Long-QT Syndrome: Detergent Free Purification of KCNE1 Using Functionalized SMALPS

A37 Marissa Fornadel, Chemistry and Environmental Science Major
Advisor(s): Scott Hartley, Department of Chemistry and Biochemistry
Roshan Lama, Department of Chemistry and Biochemistry
Abiotic Proteins: ortho-Phenylenediamine Based Fielder Cages

A38 Nicholas Wilson, Chemistry and Chemical Engineering Major
Advisor(s): Benjamin Gung, Department of Chemistry and Biochemistry
Machine Learning in Organic Chemistry: Improving the Accuracy of Elimination Reaction Predictions

A39 Mallory Campbell, Geology Major
Advisor(s): Tamme Gerke, Department of Geology & Environmental Earth Science
Using Student Outreach to Create Stewards of the Environment

A40 Hoang Nguyen, Biomedical Engineering Major
Advisor(s): Jeong-Hoi Koo, Department of Mechanical and Manufacturing Engineering
The Role of Skin Deformation in Radial Pulse Measurements

A41 Hannah Latimer, Microbiology Major
Advisor(s): Mitchell Balish, Department of Microbiology
Unusual Cell Division in Cell Wall-less Bacteria

A42 Benjamin Nagle, Microbiology Major
Advisor(s): Rachael Morgan-Kiss, Department of Microbiology
MB0475: The Effects of Environmental Stressors on Antarctic Algae

A43 Joseph Morgan, Microbiology Major
Advisor(s): Rachael Morgan-Kiss, Department of Microbiology
Aerobicbacteria and Their Link to Unique Microbial Ecosystems in the Taylor Dry Valleys, Antarctica

A44 Eva Williams, Environmental Earth Science and Sustainability Major
Ben Shriver, Geology Major
Advisor(s): Brian Currie, Department of Geology & Environmental Earth Science
HYSR Analysis of Heterogeneous Buried Glacial Valley Deposits, Southwestern Ohio

A45 Sophie Elefman, Chemistry and Neuroscience Major
Advisor(s): Neil Danielson, Department of Chemistry and Biochemistry
Philip Boes, Department of Chemistry and Biochemistry
Applications of Dimethyl Carbonate for the HILIC Separation of Sugars with Charged Aerosol Detection: Greener Industrial Solvents

A46 Maddie Canter, Microbiology Major
Advisor(s): Joseph Carlin, Department of Microbiology
Impact of Chlamydia on Caspase Activation

A47 Ashlee Greathouse, Anthropology and Premedical Studies Major
Advisor(s): Joseph Carlin, Department of Microbiology
Paul Flaspohler, Department of Psychology
Depicting Inequities in Oral Health: Barriers to Dental Care Among Marginalized Groups in the U.S.

A48 Hannah Newell, Chemistry and Premedical Studies Major
Advisor(s): Joseph Carlin, Department of Microbiology
Paul Flaspohler, Department of Psychology
Seeing a Future Together: The Potential for Health Programs to Reduce Avoidable Blindness in Rural Communities

A49 Ryan Gora, Microbiology Major
Advisor(s): D.J. Ferguson, Department of Microbiology
Roshan Timinsa, Department of Microbiology
Carmine Degradation in an Isolated Strain of the Gut Bacterium Clostrabacter Amanolacticus

A50 Cynthia Fischer, Applied Biology Major
Advisor(s): Ann Rypraha, Department of Biology
Alex Salazar, Department of Biology
Effect of Humidity on Foraging Success and Web Structure in Two Invasive Species of Cellar Spiders (Araneae: Pholcidae)

A51 Annemarie Jones, Kinesiology, Nutrition and Health Major
Taylor Thornburg, Kinesiology and Premedical Studies Major
Advisor(s): Helaine Alessio, Department of Kinesiology, Nutrition and Health
Nancy Malay, Department of Kinesiology, Nutrition and Health
Dean Smith, Department of Kinesiology, Nutrition and Health
Comparison of a Dual-Task and Typical Exercise Program on Physical and Cognitive Function in Adults

A52 Abigail Green, Biology and Premedical Studies Major
Advisor(s): Katia Del Río-Tsions, Department of Biology
Erika Grajales Esquivel, Department of Biology
Retina Regeneration in the Spanish Newt

A53 Abbey Smith, Biology and Spanish Major
Sarah Johnson, Microbiology Major
Advisor(s): Dawn Blitz, Department of Biology
Effects of Diet on the Gastric Mill (Chewing) Behavior in the Crab Cancer borealis

A54 Jason Abele, Biology and Women’s, Gender, and Sexuality Studies Major
Advisor(s): Paul James, Department of Biology
Cameron Gardner, Department of Biology
Characterizing the Role of NHE11 in Mammalian Sperm Physiology Using CRISPR/Cas9 Gene Edited Mice

A55 Caroline Reckers, Biology Major
Advisor(s): Paul James, Department of Biology
Cameron Gardner, Department of Biology
The Impact of Methylation on the Epigenetic Regulation of the SLC9B1 gene

A56 Margaret Wilson, Zoology and Neuroscience Major
Aine Powell, Psychology Major
Advisor(s): Matthew McMurray, Department of Psychology
Oscar Sandoval, Department of Psychology
Effectiveness of Psilocybin in Females Depends on Estrous Stage

A57 Chanchy Pandya, Physics and Computer Science Major
Kai Brown, Physics Major
Advisor(s): Sami Ball, Department of Physics
Building a Compact, Portable IR Viewer for Less than $250 Using a Raspberry Pi Single-Board Computer

A58 Lana Money, Political Science Major
Brian Calloway, Psychology and Premedical Studies Major
Jill Fanning, Geography and Sustainability Major
Advisor(s): Carolyn Craig, DEI and Belonging
Abigail Morgan, Librarian
Medical Health Stigmas in Historically Underrepresented Communities

A59 Nya Hodge, English Creative Writing and Journalism Major
Sarah Flowers, Political Science and Individualized Studies Major
Lucas Sneller, Political Science and Economics Major
Shea Diddle, Psychology and Neuroscience Major
Advisor(s): Abigail Morgan, Librarian
Academic Resources for Black and Latino Students

A60 AnnaGrace Harris, Psychology Major
Jasmine Wade, Philosophy Major
Gabrielle Christmon, Psychology Major
Katie Jachim, English Linguistics Major
Advisor(s): Carolyn Craig, DEI and Belonging
Abigail Morgan, Librarian
Success in Student Fosterment of LGBTQ+ Identities at Miami University

16 MiamiOH.edu

POSTER PRESENTATION LISTING BY POSTER NUMBER

Wednesday, April 19, 2023
John Dolibois Room

SESSION A
9:00 – 10:30 a.m.
POSTER PRESENTATION LISTING BY POSTER NUMBER

SESSION B
1:00 – 2:30 p.m.

B01 Corvo Tran, Chemistry Major
Advisor(s): Scott Hartley, Department of Chemistry and Biochemistry
Characterization of Patterned Chemically-Fueled Hydrogels

B02 My Nguyen, Data Science & Statistics Major
Advisor(s): Pei Wang, Department Statistics
Improving Predictive Power with Pre-Tuned Principal Component Regression: A Case Study

B03 Alexandria Coffman, Urban Planning and Geography Major
Advisor(s): Susan Jakubowski, Department of Geography
Connecting Marginalized Communities to Amenities: Evaluating Lake Shore Drive Crossings on the South Side of Chicago

B04 Joshua Senger, Arts Management and Music Major
Advisor(s): Youngah Koh, College of Creative Arts
How Diversity, Equity, and Inclusion Principles and are Implemented Within A Local Performing Arts Organization

B05 Mallory Millat, Psychology Major
Advisor(s): Rosa Marie Ward, Department of Psychology
The Impact of Belonging to Minority-Based Organizations on Minority Stress Experiences in College Students

B06 Gracie Grady, Political Science Major
Christian Kolanos, Diplomacy and Global Politics Major
Kennedy Withers, English Creative Writing and Media and Culture Major

B07 Kat Pikuš, Psychology Major
Sarah Lett, Psychology and Nutrition Major
Katie Craig, Psychology Major
Tori Dusing, Data Analytics Major
Maddie Reger, Psychology Major

B08 August Ogunnowo, Biology and Neuroscience Major
Advisor(s): Anna Radke, Department of Psychology
Roman Zegarelli, Department of Psychology
Effects of GASP-I Protein on Binge-like and Aversion Resistant Drinking in C57 Mice

B09 Jon Sciortino, Psychology and Neuroscience Major
Advisor(s): Matthew McMurray, Department of Psychology
Oscar Sandoval, Department of Psychology
Indicators of Hepatic and Renal Health after Psychiatric Treatment in Rats

B10 Sarah Quinlivan, Kinesiology and Public Health Major
Advisor(s): Matthew McMurray, Department of Psychology
Behavioral Effects of N,N,N-Trimethyltryptamine and Possible Receptor Mechanisms

B11 Adella DeCapite, Psychology and Major
Alvaro Arranz, Political Science and Major
Daija Keller, Psychology and Major
Terren Lewis, English Creative Writing and Major Advisor(s): Carolyn Craig, DEI and Belonging
Abigail Morgan, Librarian
Academic Success and Student Involvement

B12 Leslie James, Public Health Major
Advisor(s): Vaishali Raval, Department of Psychology
Paul Flaspohler, Department of Psychology
How Difficulty with Accessing Healthy Foods in Shelters Contribute to Diabetes Among Homeless Adults

POSTER PRESENTATION LISTING BY POSTER NUMBER

Wednesday, April 19, 2023
John Dolibois Room

B13 Megan Robertson, Zoology and Premedical Studies Major
Natália Pasador, Psychology and Neuroscience Major
Mallory Millat, Psychology and Neuroscience Major
Advisor(s): Anna Radke, Department of Psychology
Effects of Morphine Withdrawal on FMOR Mice

B14 Ashley Morris, Anthropology and International Studies Major
Advisor(s): Neringa Kulbytė, Department of Anthropology
Legacies of Conflict: Influences on Public Opinion in Germany and Lithuania on the War in Ukraine

B15 Hannah Gera, Psychology Major
Advisor(s): Elizabeth Kiel, Department of Psychology
Does Gender Moderate the Relation Between Parasympathetic Regulation and Empathic Behaviors

B16 Lindsay Doughlass, Anthropology and Spanish Major
Advisor(s): Paul Flaspohler, Department of Psychology
McKenna Ackon, Department of Psychology
Tightening the Safety Net: Mental Health Services for Hispanic Patients in Free Clinics

B17 Evan Danielson, Chemical Engineering and Music Performance Major
Preston Beach, Chemical and Paper Engineering Major
Paul Carter, Bioengineering Major
Ben Champagne, Engineering Management Major
Gretchen Day, Chemical and Paper Engineering Major
Will Baldwin, Engineering Management Major
Tai Goddard, Chemical and Paper Engineering Major
Sarah Kubican, Bioengineering Major
Jessica Lutz, Engineering Management Major
Denali Selent, Engineering Management and Environmental Science Major
Justin Tirtadja, Chemical and Paper Engineering Major
Advisor(s): Catherine Almquist, Department of Chemical, Paper, and Biomedical Engineering
Alim Dewan, Department of Chemical, Paper, and Biomedical Engineering
Alvin Wei, Department of Chemical, Paper, and Biomedical Engineering
Heat Recovery from Aerated Static Composting Systems

B18 Rachel Olp, Chemical Engineering and Energy Major
Advisor(s): Catherine Almquist, Department of Chemical, Paper, and Biomedical Engineering
Kath Hohn, Department of Chemical, Paper, and Biomedical Engineering
Investigation of a Novel Poryzylated PDMs/NI Catalyst for Dry Reforming of Methane (DRM)

B19 Ezra Eccles, Biological Physics and Premedical Studies Major
D’Erick Underwood, Psychology Major
Advisor(s): Anna Radke, Department of Psychology
Examining Sex Differences in Ethanol Consumption Using the Four Core Genotypes Model

B20 Harrison Carvour, Psychology Major
Advisor(s): Anna Radke, Department of Psychology
Role of Mu-Opoid expression on Fos/P2 Neurons in Aversion-Resistant Drinking

B21 Hailey Moore, Psychology Major
Soeph Eileen, Chemistry and Neuroscience Major
Advisor(s): Jennifer Quinn, Department of Psychology
Brianna Minshall, Department of Psychology
Persistent Effects of Early Life Acute Versus Chronic Footshock Stress on Fear and Anxiety Behaviors in Adulthood

B22 Samuel Kerr, Geology Major
Advisor(s): Jason Rech, Department of Geology & Environmental Earth Science
Abigail O'Connor, Department of Geology & Environmental Earth Science
Organic Carbon/Nitrogen Content in Age-Calibrated Soils At-Depth

B23 Ryan Sawyer, Environmental Earth Science and Sustainability Major
Connor Woodward, Environmental Earth Science Major
Conor Calhoun, Geology Major
Advisor(s): Brian Currie, Department of Geology & Environmental Earth Science
Surficial Geologic Map of Part of the Miami University Natural Areas Near Oxford, Ohio
POSTER PRESENTATION LISTING BY POSTER NUMBER

Wednesday, April 19, 2023
John Dolibois Room

B24  Kyra Stillwell, Physics Major
Advisor(s): Mahmud Khan, Department of Physics
**The Effect of Acid Treatment on the Magnetic and Magnetocaloric Properties of Al_{1-x}Co_{x}Fe_{2}O_{4}(x) SIR(19Fe282)**

B25  Zoe Platos, Biochemistry and Psychology Major
Advisor(s): Matthew McMurray, Department of Psychology
**Effects of Adolescent Lorazepam Exposure on Alcohol Drinking Behavior in Adults**

B26  Katie Oakes, Biology Major
Ian Collamer, Microbiology Major
Hayley Croycraft, Microbiology Major
Gunnar Frechette, Biology Major
**Phytoplankton Communities**

B27  Tori Soria, Public Health Major
Advisor(s): Kelly Abshire, Department of Microbiology
Paul Flaspohler, Department of Psychology
**Food Insecurity in Rural Ohio: How Might Collaboration Better Serve This Population?**

B28  Meredith Horn, Microbiology Major
Mikki Fritsch, Microbiology Major
Advisor(s): Rachael Morgan-Kiss, Department of Microbiology
**MBI475: Antarctic Lake Depth and its Responding Phytoplankton Communities**

B29  James Mueller, Microbiology and Premedical Studies Major
Alexis Permenter, Microbiology and Biochemistry Major
Advisor(s): Rachael Morgan-Kiss, Department of Microbiology
**Antarctic Lake Algae Communities Respond to Environmental Stress**

B30  Kelsey Hess, Geography and Environmental Science Major
Advisor(s): Michael Vanni, Department of Biology
Amy Weber, Department of Biology
**Long Term Trends in Suspended Sediments and Nutrients in Four Mile Creek Watershed**

B31  Sofia Rebull, Biology Major
Advisor(s): Katia Del Rio-Tsonis, Department of Biology
Jared Tangeman, Department of Biological Sciences
**Visualizing Gene Expression To Understand Ocular Development and Regeneration**

B32  Ally Moore, Microbiology Major
Emily Hoover, Microbiology and Premedical Studies Major
Advisor(s): Rachael Morgan-Kiss, Department of Microbiology
**MBI475: Influence of Extreme Environmental Conditions on Antarctic Lake Algae**

B33  Eckhardt Karsten, Microbiology and Environmental Science Major
Gabriel Tonucci, Microbiology Major
Advisor(s): Rachael Morgan-Kiss, Department of Microbiology
Bradley Kryszak, Department of Microbiology
**MBI475: Phytoplankton Resilience of Antarctic Lake Algae to a Salinity Gradient**

B34  Jonathan Hauman, Biology and Environmental Science Major
Advisor(s): Maria Gonzalez, Department of Biology
**Potential Drivers of Decadal Bluegill Patterns in Turbidity Reservoirs**

B35  Max Striedel, Biology Major
Advisor(s): Michael Vanni, Department of Biology
**Sedimentation Trends in Acton Lake and Its Responding Phytoplankton Communities**

B36  Allie Boyd, Geography and Biology Major
Advisor(s): John Maingi, Department of Geography
**Modeling Habitat Suitability for the Endangered Species, Eupus Greyii (Greyy’s Zebra)**

B37  Haley Malton, Botany Major
Advisor(s): Carolyn Keffler, Department of Biology
**Miami Middletown Greenhouse Pathogen Identification and Management**

B38  Noelle Wittwer, Zoology Major
Adam Livingston, Biology Major
Advisor(s): Susan Hoffman, Department of Biology
**Antarctic Lake Algae Communities Respond to Environmental Stress**

B39  Julia Wotowicz, Biology and Premedical Studies Major
Advisor(s): Michael Vanni, Department of Biology
**Using Biologging Data from Turtles to Assess Repeatability and Consistency in Student Learning?**

B40  Cassidy Waldrep, Biology, Spanish and Neuroscience Major
Advisor(s): Paul Schaeffer, Department of Biology
**Using Biologging Data from Turtles to Assess Repeatability and Consistency in Student Learning?**

B41  Rachel Creeden, Integrated Science Education Major
Advisor(s): Ellen Yezielski, Department of Chemistry and Biochemistry
**The Relationship Between Female Hormone Usage and Pelvic Inflammatory Disease**

B42  Matthew Beckman, Chemistry Major
Advisor(s): Neil Danielson, Department of Chemistry and Biochemistry
**Modeling Habitat Suitability for the Endangered Species, Eupus Greyii (Greyy’s Zebra)**

B43  Guang Tran, Chemistry Major
Advisor(s): David Tienman, Department of Chemistry and Biochemistry
**Spin Equilibrium of Cobalt-Salen Complexes**

B44  Sarah Johnson, Microbiology and Premedical Studies Major
Shane Schroeder, Computer Science Major
**Predicting the Transmissibility of Emerging SARS-CoV-2 Variants Through Bioinformatic Approaches**

B45  Sahil Angembale, Biochemistry and Premedical Studies Major
Advisor(s): Meixia Zhao, Department of Biology
**Determination of Recombination Frequency Between Sexes in a Maze Hybrid**

B46  Joseph Hasak, Bioengineering Major
Advisor(s): Karthik Vishwanath, Department of Physics
**Student Learning?**

B47  Krissy McHugh, Public Health and Data Science and Statistics Major
Tori Soria, Public Health Major
Advisor(s): Saruna Ghimire, Department of Sociology and Gerontology
**Integrated Science Education Major**

B48  Meghana Sugoor, Biology Major
Advisor(s): Andrea Kavrats, Department of Chemistry and Biochemistry
Ikonwmosa Obasaki, Department of Chemistry and Biochemistry
Yaa Sarfoaw Amankwah, Department of Chemistry and Biochemistry
**Structural Transitions Modulate the Chaperone Activities of Grp94**

B49  Angelina Fichtner, Psychology and Kinesiology Major
Advisor(s): Rose Marie Ward, Department of Psychology
**The Relationship Between Sensory Input and Alcohol Drinking Patterns in College Students**
POSTER PRESENTATION LISTING BY POSTER NUMBER

Wednesday, April 19, 2023
John Dollibois Room

SESSION B
1:00 – 2:30 p.m.

B50 Miles Lynn, Psychology and Premedical Studies Major
Advisor(s): Rose Marie Ward, Department of Kinesiology, Nutrition and Health
How Advertisements and Corporate Psychology Influence the Narrative on College Student Drinking

B51 Madeline Webber, Speech Pathology & Audiology and Premedical Studies Major
Cece Meinking, Biochemistry and Music Performance Major
Advisor(s): Joyce Fernandes, Department of Biology
Learning How to Communicate Research with Non-Disciplinary Audiences

B52 Laurn Cook, Biochemistry and Public Health Major
Claire Sanford, Public Health Major
Advisor(s): Saruna Ghimire, Department of Sociology
Exploring the Relationship Between Body Weight, Alcohol Consumption and Gerontology

B53 Sam Streberger, Public Health Major
Matt Tavens, Public Health Major
Advisor(s): Saruna Ghimire, Department of Sociology and Gerontology
Is There an Association Between Secondhand Smoke Exposure and The Development of Depression in U.S. Adults, a Cross-Sectional Study

B54 Ridha Nazir, Public Health and Premedical Studies Major
Lisa Clemens, Public Health Major
Advisor(s): Saruna Ghimire, Department of Sociology and Gerontology
Exploring the Relationship Between Body Weight, Body Mass Index, and Endometriosis Diagnosis

B55 Ashley Hitchcock, Biology and Public Health Major
Advisor(s): Beth Miller, Department of Kinesiology, Nutrition and Health
Paul Flaspohler, Department of Psychology
Hungry for More: Food Insecurity Programs at Miami University

B56 Lidia Harusic, Marketing & Human Capital Management and Leadership Major
Advisor(s): Erik Jensen, Department of History
An Exploration of Bonuses Consumer Behavior as a Unique Product of Liminal and Cross-Border Interactions

B57 Nina Liebes, Social Work Major
Advisor(s): Sandra Garner, Department of Global & Intercultural Studies
Respect Native Sovereignty in Social Work Practice

B58 Kayleigh Reimuller, Anthropology and Psychology Major
Advisor(s): Mark Peterson, Department of Anthropology
Emotive Play in Super Smash Brothers

B59 Brett Novits, Anthropology Major
Advisor(s): Mark Peterson, Department of Anthropology
Metapragmatics of Competitive FPS Games

B60 Nico Jaworski, Anthropology Major
Advisor(s): Kelsey Ellis, Department of Anthropology
Making in Lowland Woolly Monkeys (Lagothrix lagotricha poeppigii)

POSTER PRESENTATION LISTING BY POSTER NUMBER

Wednesday, April 19, 2023
John Dollibois Room

SESSION C
3:00 - 4:30 p.m.

C01 Griffin Chadwick, Biology Major
Advisor(s): Jennifer Schumacher, Department of Biology
Investigating the Temporal Role of Retinoic Acid Signaling in Cardiac Outflow Tract Development

C02 Riley Johnson, Biology and Premedical Studies Major
Anna Medina, Biology Major
Advisor(s): Jennifer Schumacher, Department of Biology
Establishing Heart Size in Zebrafish

C03 Kiki Kollar, Biology and Premedical Studies Major
Advisor(s): Jennifer Schumacher, Department of Biology
Investigating the Role of Retinoic Acid Signaling on Establishing Heart Size in Zebrafish

C04 Allison Small, Biology Major
Advisor(s): Jennifer Schumacher, Department of Biology
Retinoic Acid Signaling Promotes Ventral Aorta Development in Zebrafish

C05 Jayden Tharp, Biochemistry and Premedical Studies Major
Advisor(s): Andor Kiss, Department of Biology
Establishing Myocardial Apoptosis in Zebrafish

C06 Cayla Cobum, Family Science and Social Work Major
Advisor(s): Paul Flaspohler, Department of Psychology
Bridging the Gap: The Importance of Innovation Specific and General Capacities in After-school Programming

C07 Megan Louttit, Public Health Major
Advisor(s): Paul Flaspohler, Department of Psychology
Kelly Abshire, Department of Microbiology
Inject Money in Harm Reduction: The Life and Cost Saving Powers of Syringe Services Programs

C08 Katy Rusche, Microbiology and Environmental Science Major
Rachel Foley, Psychology Major
Jacob Wasson, Psychology Major
Brianna Colomba, Psychology Major
Gabriella Goyer, Psychology Major
Hung Pham, Psychology and Data Science and Statistics Major
Maeve Talty, Psychology Major
Advisor(s): Paul Flaspohler, Department of Psychology
Amy Kerr, Department of Psychology
Literature Review of Interprofessional Education in Psychology

C09 Hunter Wells, Psychology and Neuroscience Major
Advisor(s): Matthew McMurray, Department of Psychology
Oscar Sandoval, Department of Psychology
The Effects of Psilocybin on Maternal Behavior

C10 Alexia Zyiko, Biology and Neuroscience Major
Advisor(s): Matthew McMurray, Department of Psychology
Age-Related Differences in Rat Behavioral Responses to Psilocybin

C11 Madelyne Hall, Psychology and Neuroscience Major
Advisor(s): Jennifer Quinn, Department of Psychology
Jacob Dowell, Department of Psychology
Testing a Novel Ligand for Non-DREADD Mediated Effects

C12 Mia Sooch, Biology and Premedical Studies Major
HaoFeng Tian, Psychology and Neuroscience Major
Charlotte Roemer, Psychology Major
Brenda Martinez, Medical Laboratory Science and Premedical Studies Major
Advisor(s): Anna Radke, Department of Psychology
The Effects of Sucrose on Chat-MOR Knockout Mice in an Operant Conditioning Chamber

C13 Grace Haidle, Psychology and Neuroscience Major
Edith Padilla, Psychology Major
Claire Lopez, Psychology Major
Bailey Catino, Biochemistry and Public Health Major
Advisor(s): Matthew McMurray, Department of Psychology
Ana Durante, Department of Psychology
Knockout Mice with and without the Mu-Opioid Receptor
POSTER PRESENTATION LISTING BY POSTER NUMBER

Wednesday, April 19, 2023
John Doolbois Room

SESSION C
3:00 – 4:30 p.m.

C14 Yingying Gao, Psychology Major
Advisor(s): Anna Radke, Department of Psychology
Thomas Perry, Department of Psychology
The Effects of Early Life Stress on Alcohol Drinking Behavior in Mice

C15 Cambria Beaus, Psychology and Neuroscience Major
Advisor(s): Anna Radke, Department of Psychology
The Role of Striatal Cholinergic Interneurons in Fentanyl Consumption

C16 Zoe Kehs, Zoology Major
Camryn McClelland, Zoology and Sustainability Major
Advisor(s): David Russell, Department of Biology
Matthew Valiga, Department of Biology
Math Diversity and Abundance in an Old Growth Eastern Deciduous Forest

C17 Anthony Petulla, Biology and Data Science and Statistics Major
Advisor(s): Michael Robinson, Department of Biology
Anil Upreti, Department of Biology
A Comprehensive Study of Mouse Lens Epithelial Explant Development

C18 Wolfgang Graf, Botany Major
Cole Bewick, Botany Major
David Klump, Botany Major
Advisor(s): Richard Moore, Department of Biology
The Effects of Invasive Honeysuckle on Spring Ephemeral Phenology

C19 Alexander Szymczak, Biochemistry and Economics Major
Advisor(s): Kathleen Killian, Department of Biology
Mackenzie Farleigh, Department of Biology
Regulation of Lysozyme Expression and Activity by the Fragile X Mental Retardation Gene

C20 Katie Schuckmann, Biology and Psychology Major
Advisor(s): Katia Del Rio-Tsonis, Department of Biology
José Raúl Pérez-Estrada, Department of Biology
Establishing Genome Editing Tools for Studying Lens Regeneration

C21 Hannah Bay, Biology and Environmental Science Major
Advisor(s): David Russell, Department of Biology
Matthew Valiga, Department of Biology
Changes in Interior Alaskan Flying Insect Biomass

C22 Jillian Lentz, Biology and Music Major
Advisor(s): Michael Robinson, Department of Biology
Jacob Weaver, Department of Biology
Phenotypic Characterization of FDXE3 Knockouts and a Streamlined Protocol for Fluorescent Activated Cell Sorting (FACS)

C23 Angelica Vasiliatos, Botany and Environmental Science Major
Advisor(s): Richard Moore, Department of Biology
Ethan Grant, Department of Biology
Floral Color Change in Vancocica Parviflora

C24 Madison Slosser, Biology and Premedical Studies Major
Hope Keane, Biology and Neuroscience Major
Advisor(s): Kathleen Killian, Department of Biology
Siva Lakshamana Vijayarajan, Department of Biology
Role of Nitric Oxide and Cricket’s Agonistic Behavior

C25 Lake Ernst, Biology and Premedical Studies Major
Advisor(s): Katia Del Rio-Tsonis, Department of Biology
José Raúl Pérez-Estrada, Department of Biology
Regenerative Hallmarks of Aging: Insights Through the Lens of Pleurodeles waltl

C26 Katie Oakes, Biology Major
Ian Collaman, Microbiology Major
Hayley Craycraft, Microbiology Major
Gunnar Frechette, Biology Major
Nick Hargett, Microbiology Major
Kavan Jackson, Microbiology Major
Lucy Jones, Microbiology Major
Mydilfa Left, Biology Major
Ana Loría, Biology Major
Meeta Patel, Microbiology Major
Madelyn Soder, Biology Major
Liv Weintraut, Biology Major
Alex Wycoff, Zoology Major
Katy Rusche, Microbiology Major
Advisor(s): Mitchell Balish, Department of Microbiology
Rebecca Balish, Department of Microbiology
Rachael Morgan-Kiss, Department of Microbiology
Kristina Gara, Department of Microbiology
Elyse Levenda, Department of Microbiology
Phage of Enlightenment: What Has Been Learned from the Isolation and Characterization of Bacteriophages of Microbacterium firorum and Streptomyces lividans

C27 Joel Pantuso-Iwaszkewicz, Microbiology Major
Advisor(s): Mitchell Balish, Department of Microbiology
Investigating the Morphology of Mycoplasma pneumoniae: Does it Change Shape Under Stress?

C28 Eian Vargas, Microbiology Major
Julia Wikes, Microbiology Major
Advisor(s): Rachael Morgan-Kiss, Department of Microbiology
The Effect of Salinity Levels on the Growth of Arctic Lake Algae

C29 Colin Gallott, Microbiology Major
Chetna Sharma, Microbiology Major
Advisor(s): Rachael Morgan-Kiss, Department of Microbiology
Bradley Kryziak, Department of Microbiology
Rochelle Pereira, Department of Microbiology
MB1757: Attachment of Bacteria to Algae as an Adaptation to Salt Stress in Antarctic Lakes

C30 Dom Marichal, Microbiology Major
Kaylie Wheelless, Microbiology Major
Advisor(s): Rachael Morgan-Kiss, Department of Microbiology
Bradley Kryziak, Department of Microbiology
Rochelle Pereira, Department of Microbiology
MB1757: Effects of Salinity on Microdiversity of Enrichment Cultures at 15 Meters

C31 Sabrina Ryland, Chemistry Major
Morgan Lovdoy, Chemistry Major
Advisor(s): Ellen Yezierski, Department of Chemistry and Biochemistry
Katie Marie Magnone, Department of Chemistry and Biochemistry
Jennifer Ebert, Department of Chemistry and Biochemistry
Bringing the Heat: Characterizing YouTube videos about Enthalpy using Mayer’s Multimedia Principles

C32 Malinda Barman, Chemistry and Science Education Major
Michelle Mancini, Biochemistry Major
Advisor(s): Ellen Yezierski, Department of Chemistry and Biochemistry
Katie Marie Magnone, Department of Chemistry and Biochemistry
Jennifer Ebert, Department of Chemistry and Biochemistry
Revamp, Review, Revive: Developing Codes for YouTube Content Using Updated Mayer’s Multimedia Principles

C33 Alexis Rochtold, Biochemistry Major
Advisor(s): Kevin Yehl, Department of Chemistry and Biochemistry
Engineering Auto-catalytic CRISPR-Cas Sensors for Ultra-sensitive Lead Detection

C34 Huy Bui, Biochemistry Major
Advisor(s): Kevin Yehl, Department of Chemistry and Biochemistry
Kevinn Morrison, Department of Chemistry and Biochemistry
Development of a Bacteria Biosensor for Herbicide Detection

C35 Caroline Bartoszek, Psychology and Neuroscience Major
Advisor(s): Jennifer Quinn, Department of Psychology
Amanda Reichert, Department of Psychology
The Effects of Sex and Early Life Stress on Conditioned Inhibition of Fear in Rodents

C36 Meredith Hansen, Biochemistry Major
Advisor(s): Michael Kennedy, Department of Chemistry and Biochemistry

C37 Haoxing Wang, Chemistry Major
Wenshu Wang, Chemistry Major
Advisor(s): Michael Kennedy, Department of Chemistry and Biochemistry
Synthesis of Chiral Gold Catalyst for Enantioselective Reaction
SESSION A
3:00 – 4:30 p.m.

Wednesday, April 19, 2023
John Dolibois Room

C38 Riley Way, Chemistry Major
Advisor(s): Dominik Konkolawicz, Department of Chemistry and Biochemistry
Shiwanta Wanasinge, Department of Chemistry and Biochemistry
The Effect of the Network Properties on the Activation Energy of a Dissociative Dynamic Covalent Bond System

C39 Steven Long, Chemistry Major
Advisor(s): Rock Mancini, Department of Chemistry and Biochemistry
Thermophobic Adjuvants for Varying Immune Response with Temperature

C40 Shijia Cao, Chemistry Major
Advisor(s): Shusong Ni, Department of Chemistry and Biochemistry
Nanoparticle infection of Virus infectivity

C41 Kathryn Williams, Chemistry Major
Advisor(s): Ann Hagerman, Department of Chemistry and Biochemistry
Alison Bates, Department of Chemistry and Biochemistry
Thermal Stability of Yeast Alcohol Dehydrogenase in the Undergraduate Teaching Lab

C42 Jenna McClain, Biology and Nutrition Major
Advisor(s): Ann Hagerman, Department of Chemistry and Biochemistry
Mailing Fu, Department of Chemistry and Biochemistry
Metabolism of Condensed Tannins by Manganese Peroxidase

C43 Jules Jefferson, Biochemistry and Nutrition Major
Advisor(s): Ann Hagerman, Department of Chemistry and Biochemistry
Zei Nanoparticles Coated with Various Types of Tannin

C44 Wen Shu Zhu, Biochemistry Major
Haoxing Wang, Chemistry Major
Advisor(s): Benjamin Gung, Department of Chemistry and Biochemistry
Enantioselective Asymmetric Synthesis using Gold Catalyst to Synthesize Anti-Cancer Compounds

C45 Zhichang Yin, Chemistry Major
Advisor(s): Neil Danielson, Department of Chemistry and Biochemistry
Ruichao Xie, Department of Chemistry and Biochemistry
Determination of Alcohols and Esters in Aqueous Solutions by Headspace Flow Injection Analysis Using a Tin Oxide Electrochemical Detector

C46 Logan Novom, Speech Pathology & Audiology Major
Hannah Davis, Speech Pathology & Audiology Major
Maddie Ranz, Speech Pathology & Audiology Major
Charlotte Cutright, Speech Pathology & Audiology Major
Advisor(s): Michael Bailey-Vankuren, Department of Business + Design, an Emerging Technology
Donna Scarborough, Department of Speech Pathology and Audiology
Validation Studies of an Advanced Flow Controlled Cup for Patients with Oropharyngeal Dysphagia

C47 Kevin Nettey, Mechanical Engineering Major
Advisor(s): Catherine Almquist, Department of Chemical, Paper and Biomedical Engineering
Evaluation of Breakthrough Curves: Perfluorooctanoic Acid Adsorption on Activated Carbon

C48 Morgan Davies, Physics and Chemistry Major
Advisor(s): Burcun Bayram, Department of Physics
Time-resolved High-resolution Spectroscopy: Lifetime Measurements of 60Ge Electronic State of Na2 Using Time Correlated Single Photon Counting

C49 Mahir Rahman, Computer Science Major
Advisor(s): Imran Mirza, Department of Physics
Quantum Computing: A Gateway to Rapid Function Processing

C50 Hannah McDougall, Engineering Physics and Computer Science Major
Advisor(s): Imran Mirza, Department of Physics
Light Particles and “Spooky” Atomic Interactions

C51 Skyler Montaine-O’Brien, Public Health Major
Advisor(s): Karly Geller, Department of Kinesiology, Nutrition and Health
Factors Affecting a Parent’s Decision to Vaccinate Their Children at Birth

Wednesday, April 19, 2023
John Dolibois Room

C52 Noah Emmert, Computer Science and Data Science and Statistics Major
Advisor(s): Shijie Zhou, Department of Chemical, Paper, and Biomedical Engineering
A Retrospective Study to Assess a Catheter Navigation Movement

C53 Grace Koo, Data Science and Statistics and Information Systems Major
Advisor(s): Donghyung Lee, Department of Statistics
Reanalyzing Korean Genome-wide Association Studies Using a Next-Generation Asian Reference Panel

C54 Justus Thomas, Data Science and Statistics Major
Hannah Walr, Data Science and Statistics Major
Advisor(s): Tatjana Mlikovic, Department of Statistics
Estimating Confidence Intervals for Risk Measures in Pareto Tails

C55 Lillian Baidenst, Speech Pathology & Audiology Major
Elise Bossenbok, Speech Pathology & Audiology Major
Advisor(s): Kelly Knollman-Porter, Department of Speech Pathology and Audiology
Variations in Eye Fixation Behaviors Evident with Aphasia-based Alexia in Multi-sentence Passages

C56 Michael Hazel, Accountancy Major
Advisor(s): Timothy Eaton, Department of Accountancy
Jonathan Pyzoha, Department of Accountancy
Accounting Ethics Education

C57 Emily Fowler, Speech Pathology & Audiology Major
Advisor(s): Kelly Knollman-Porter, Department of Speech Pathology and Audiology
Fixation and Regression Patterns and Processing Time Exhibited by College Athletes with Concussions Compared to Neurotypical College Students during Narrative Reading Tasks

C58 Emily Deeds, English Professional Writing Major
Advisor(s): Joyce Fernandes, Department of Biology
Communicating Research to Public Audiences: Faculty Perspectives

C59 Meiirelys Castaneda Ceballos, Psychology Major
Raychel Avila, Psychology Major
Lauren Haus, Psychology Major
Advisor(s): Joyce Fernandes, Department of Biology
Examining the Factors That Influence the Academic Success of Bridges Scholars

C60 Sophia Ioli, Geology Major
Advisor(s): Elisabeth Widom, Department of Geology & Environmental Earth Science
Nanci Reyes-Guzman, Department of Geology & Environmental Earth Science
Deciphering the Relationship Between the 1949, 1971, and 2021 Eruptions in La Palma, Canary Islands, Spain
MESSAGE FROM THE ASSOCIATE PROVOST AND DEAN OF UNDERGRADUATE EDUCATION

Welcome to the Spring 2023 Miami University Undergraduate Research Forum!

One of the hallmarks of Miami University is our commitment to making research opportunities available to undergraduate students. We are consistently nationally recognized for the large number of undergraduates who engage in research with their faculty. Our numbers indicate that nearly 3000 Miami students are engaged in research with faculty, and over 14,000 are learning about various aspects of the research process in research-based courses. These research experiences deepen students’ understanding of their content areas, provide innovation in the fields in which they study, and prepare many of our students for graduate school and rewarding careers in research fields. Our faculty commitment to providing these unique experiences is unparalleled in public universities. These efforts reflect our faculty’s commitment to undergraduate education and the teacher-scholar approach to their work.

This year’s forum highlights research projects across Miami University’s academic divisions: Arts & Science, Business, Creative Arts, Education, Health, & Society, Engineering & Computing. We are pleased this year to be thinking about how communicating our research stories can broaden the impact of our research in making real change and improvements to society, climate, mental health, and many other human experiences.

Congratulations to the over 300 students from across the University who are presenting their work this year, many of whom are first-year students. And, a most sincere thank you to the 98 faculty mentors and 52 graduate students who have devoted time and energy to mentoring these students. Finally, thank you to the Office of Research for Undergraduates for their tireless effort to ensure that these opportunities are available to students, and that they are celebrated in this amazing forum, which we are so happy is back to an in-person format. I am excited to learn with you as I explore the three poster sessions and two concurrent talk sessions that are part of this forum.

Love and Honor,
Amy Aldous Bergerson, PhD
Associate Provost and Dean of Undergraduate Education

Email us: undergradresearch@MiamiOH.edu
Follow us: @MiamiOH_ORU
Tag us: #MiamiOH_UGRforum2023 #MiamiOHUndergradResearch

RESEARCH MENTORS

ACCOUNTANCY
Timothy Eaton
Jonathan Pyzoha

ANTHROPOLOGY
Kelsey Ellis
Mark Peterson

ART
Stephanie Danker
Annie Dell’Aria

BIOLOGICAL SCIENCES
Jared Tangeman

BIOLOGY
Dawn Blitz
Katia Del Rio-Tosins
MacKenzie Farleigh
Joyce Fernandez
Daniel Gladish
Maria Gonzalez
Grajales Esquivel
Ethan Grant
Susan Hoffman
Paul James
Carolyn Keffler
Kathleen Killian
Andor Kiss
Siva Lakshamana Vijayarajan
Chun Liang
Richard Moore
Chris Myers
Deannah Neupert
Jose Raul Perez-Estrada

CHEMICAL, PAPER, AND BIOMEDICAL ENGINEERING
Catherine Almqvist
Jason Berberich
Amin Dewan
Keith Hohn
Shihe Zhou

CHEMISTRY AND BIOCHEMISTRY
Alison Bates
Philip Boes
Neil Danielson
Mailing Fu

CLASSICS
Denise McCoskey

COLLEGES OF ARTS
Youngaah Koh

DIVERSITY, EQUITY, INCLUSION & BELONGING
Carolyn Craig

EDUCATIONAL PSYCHOLOGY
Sarah Watt

ENGINEERING
Meiling Fu
Neil Upreti

FRENCH, ITALIAN AND CLASSICAL STUDIES
Denise McCoskey

GEOGRAPHY
Marcia England

GEORGE & ENVIRONMENTAL SCIENCE
Brian Currie

HISTORY
Sandra Garner

INFOMATION SYSTEMS AND ANALYTICS
Fadel Megahed

KINESIOLOGY, NUTRITION AND HEALTH
Helane Alessio

MECHANICAL AND MANUFACTURING ENGINEERING
Jeong-Hoi Koo

PSYCHOLOGY
Carolyn Craig

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THE 29TH ANNUAL UNDERGRADUATE RESEARCH FORUM

BACK IN PERSON

We are back in-person (!!) after three years of hosting virtual forums. As always, the annual undergraduate research forum builds on a rich tradition of celebrating and showcasing scholarly and creative works conducted by our undergraduate students, under the guidance of dedicated mentors- faculty, staff & graduate students. The online event during the COVID-19 pandemic allowed us to develop a UR forum website which has served as a searchable repository of student presentations, and which we will continue to use in the near future.

Three new events have been planned to celebrate our return to an in-person event. I am particularly excited about a featured exhibit on “Telling your Research Story”, the product of a year-long collaboration with University Communications and Marketing. The work of students across Miami University’s six divisions have been highlighted in this all-day exhibit in the foyer of Shriver Center. A panel discussion at 11am [Heritage Room] will feature several of these students. This is only one aspect of our efforts to raise the visibility of undergraduate research for the Miami community and beyond. Approximately 100 students who received Undergraduate Summer Scholars (USS) awards in 2022 attended workshops on communicating research with general audiences. In collaboration with staff from UCM, and with additional input and contexts from other stakeholders on campus such as Admissions, Alumni Engagement, Government Relations and Career Services, students learned about the importance of creating narratives for a variety of general audiences- such as alumni, prospective students, family members, employers, etc. This exercise not only helped students to become aware of a different space to share their research stories, it also allowed campus offices to become involved with promoting these research stories.

This 29th Undergraduate Research Forum also recognizes 17 research centers and other offices across campus that have a stake in undergraduate research. Staff from these centers and offices will have tables and informational materials during the three poster sessions in the John Dolibois Room. A lunch-time panel on “Beyond Undergraduate Research—From imagination to impact” is a collaboration with Miami University’s office for Advancing strategy, partnerships, institutional relations, and economy (ASPIRE). The discussion will showcase Miami’s newest initiative “College@Elm”, a national model for how a rural community can leverage its creative and technological assets to elevate the local economy and contribute to a vibrant world-class entrepreneurial ecosystem. This has implications for how the undergraduate experience and institutional resources can be leveraged in ways that position students to make meaningful contributions in their chosen careers.

A sincere thanks to all the student presenters who make the choice to participate in the undergraduate research forum to tell their stories, and especially to faculty and graduate student mentors who have been instrumental in their journeys. I am very appreciative of the long hours that Martha Weber, coordinator of Undergraduate Research, devotes each year, taking care of the many little details that make the event a grand success. We invite the university community to engage in this signature celebration and to share your ideas for raising the profile of undergraduate research at Miami University.

On November 16, 2010, the U.S. House of Representatives declared the week of April 11, 2011, as “Undergraduate Research Week.” This year, the celebratory week occurs from April 17-21. The Council on Undergraduate Research requests participation through Twitter #URW2023

Joyce J. Fernandes,
Director of Undergraduate Research & Professor of Biology

Email us: undergradresearch@MiamiOH.edu
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Tag us: #MiamiOH_UGRforum2023, #MiamiOHUndergradResearch
MIAMI UNIVERSITY UNDERGRADUATE RESEARCH OPPORTUNITIES

The Office of the Provost and funds from individual gifts and grants to various departments across Miami University support Miami students’ exploration of research.

Office of Research for Undergraduates
The ORU champions the vision, marketing, and coordination of research and creative efforts by Miami University undergraduate students. The ORU focuses on increasing participation in research and creative efforts of students in all majors; increasing the overall quality of undergraduate research at Miami, as evidenced through publications, grants, and fellowships; and broadening student participation and faculty mentorship in diverse disciplines and backgrounds. In addition to the Undergraduate Research Forum, the ORU is responsible for:

- Promoting and publicizing the research achievements of Miami students
- Coordinating multi-disciplinary curricular efforts, such as the First-Year Research Experience (FYRE)
- Administering university-wide undergraduate research programs, such as DUOS, URA, and U$St
- Offering co-curricular program support including workshops, seminars, site visits, etc.
- Assisting with the identification of appropriate funding opportunities for student-led research
- Offering clear routes to research opportunities, both at Miami and across the nation (e.g., summer programs, internships)
- Collaborating with other offices, such as Global Initiatives, Honors Program, Howe Writing Center, and the University Libraries
- Advocating beyond the university for support of undergraduate research through professional memberships

The Council on Undergraduate Research — Office of Research for Undergraduates

The Council on Undergraduate Research (CUR) is a national non-profit educational organization that provides research opportunities for students and faculty. The CUR mission supports and promotes high-quality mentored undergraduate research, scholarship, and creative inquiry. Undergraduate research, scholarship, and creative inquiry is fundamentally a pedagogical approach to teaching and learning. With an emphasis on process, CUR defines undergraduate research as: A mentored investigation or creative inquiry conducted by undergraduates that seeks to make a scholarly or artistic contribution to knowledge.

In fall 2023, CUR selected a Miami University 3 Member Team to participate in the Scholars Transforming Through Research (STR): CUR’s Advocacy Program. This pilot program serves as a six-month professional development opportunity for those undergraduate students and faculty/members interested in garnering communication and advocacy skills to leverage the impact of undergraduate research experiences.

On April 25-26, 2023, Miami Team will present during Virtual celebration, open to all community members, to join in the celebration of our program graduates during a spring capstone presentation activity.

Among the many activities and networking opportunities that CUR provides, the organization also offers support for the professional growth of faculty and administrators through expert-designed institutes, conferences, and a wide range of volunteer positions. Visit www.cur.org

Undergraduate Research Opportunities — Office of Research for Undergraduates

DOCTORAL-UNDERGRADUATE OPPORTUNITIES FOR SCHOLARSHIP (DUOS)
Miami's DUOS program heightens the synergy between our graduate and undergraduate programs. Sponsored by the Graduate School and the Office of Advancement of Research and Scholarship, and in partnership with Miami's Preparing Future Faculty initiative, DUOS enables Miami undergraduates to do research or other creative activities guided by a talented graduate student mentor. Either graduates or undergraduates may initiate applications, but the undergraduate student maintains intellectual ownership of the project. Publication of research results is expected, and funds are awarded to the undergraduate and doctoral student for use in the research project. Any Miami University undergraduate student and any post-master’s doctoral student in good standing may apply to participate.

FIRST YEAR RESEARCH EXPERIENCE (FYRE)

The FYRE program aims to impact student achievement and retention through involvement in research and inquiry at the very start of their college experience. The program encourages students to develop meaningful relationships with Miami faculty, graduate students, and their peers outside of the classroom. Over 500 Miami students have participated in the program since 2009.

The FYRE program provides students with authentic, hands-on research experiences in small teams led by research-active faculty during a two-semester course sequence. Student researchers review their topic, design a study, and complete necessary training during the fall semester; they implement the study, analyze data, and present the results in the spring. This experience prepares students early for subsequent research opportunities, such as summer research positions across the nation, and independent research supervised by Miami faculty.

Joining the program requires a two-semester commitment from the student, who must agree to:

- enroll in the 2-credit required seminar (UNV171 or UNV172)
- dedicate 2-4 additional hours per week to a faculty-mentor team research project

Funds is to foster and support research and creative activity from all disciplines, as well as to provide students with a hands-on opportunity to engage in the research process — from conception to proposal to results. While students can propose projects that augment or are related to an existing faculty project, proposals are developed by the student applicant(s), under the supervision of and with sponsorship by a faculty member.

Students may submit individual projects or team projects. Typical awards range from $150 to $500, but individual projects of exceptional merit or projects involving student teams may be funded up to $1,000. Each individual student project or team project must be endorsed by a sponsor who certifies that the project is worth doing, has educational value to the student(s), and can be accomplished in the proposed time frame. The aim and result of specific projects supported by the program may be modest as long as the work can reasonably be interpreted as research or a creative endeavor. Applications may be made for support of a research project that is also being conducted for academic credit.

MiamiOH.edu
MIAMI UNIVERSITY UNDERGRADUATE RESEARCH OPPORTUNITIES

UNDERGRADUATE SUMMER SCHOLARS (USS) PROGRAM FOR MIAMI SOPHOMORES AND JUNIORS

Miami’s nationally recognized USS program offers a premier undergraduate research experience. The USS initiative supports students in research and other creative activities during the summer under the supervision of faculty. Funds from the Provost’s Office make 100 awards available per year. Each award includes a stipend for the student, a student allowance for supplies and services. Open to students from all disciplines, the focus of this 8-week summer program is the individual student-faculty mentor relationship. Applications by individual student-faculty pairs form the basis for subsequent allocation of USS positions to departments. Although coordinated by the Office of Research for Undergraduates (ORU), departments are primarily responsible for selecting student-faculty projects and evaluating the student experiences.

University Libraries Award for Undergraduate Research Excellence (LAURE)

Undergraduate students who are conducting research using the Miami University Libraries are eligible for special recognition and a cash prize through the Libraries Award for Undergraduate Research Excellence (LAURE). This partnership between the University Libraries and the Student Library Advisory Committee seeks to recognize undergraduate students who demonstrate excellence in library research conducted in support of student projects. To learn more about the award, evaluation criteria and how to submit an entry, visit the http://libguides.lib.MiamiOH.edu/LAURE. "Our Miami University Libraries have always existed to support the scholarly excellence of our students, and nowhere is that more prevalent than in the advancement of student research," Jerome Conley, dean and university librarian, said. "We are excited to promote and celebrate the research achievements of our undergraduate students, while emphasizing the University Libraries’ role in strengthening student research at Miami."

University Honors Program (UHP)

www.MiamiOH.edu/honors

The UHP supports and provides opportunities for academically motivated students who want a highly challenging and intellectually enriched learning environment. The program emphasizes student discussion, intellectual exchange, reflection, and other active learning. Honors and Scholars students have frequent contact with faculty – many complete research or other projects working closely with a faculty mentor. The UHP provides opportunities that include study abroad, funding for research and travel, internships, and social and cultural activities. The Honors Community is composed of students from all divisions at the University.

NATIONAL PRESTIGIOUS FELLOWSHIPS APPLICATION Global Initiatives www.MiamiOH.edu/global

Aligned with Miami University’s commitment to advance global learning, Global Initiatives promotes the dynamic, comprehensive internationalization of the University through the infusion of multicultural and comparative perspectives in scholarship, teaching, and service. Our offices include Education Abroad Services, International Student and Scholar Services, the Center for American and World Cultures, the Confucius Institute, and Continuing Education.

Miami's College and Departments: Opportunities for inquiry-based learning

COLLEGE OF ENGINEERING AND COMPUTING

Engineering and Computing education at Miami offers undergraduates many opportunities to engage in meaningful research and scholarship. For more information check out each department’s undergraduate research opportunities. CEC invites students to explore the Grand Challenges Scholars Program.

COLLEGE OF ARTS AND SCIENCE STUDENT RESOURCES

Every year, more than 1,585 members of our Miami community pursue research opportunities within the College of Arts and Science. These interdisciplinary and experiential learning collaborations enable you to work closely with faculty mentors or to develop your own independent research projects – on campus, online, and around the world – whether you are a first-year undergraduate student, a graduate degree candidate, or a member of our faculty.

COLLEGE OF EDUCATION, HEALTH AND SOCIETY

The College of Education, Health, and Society (EHS) seeks to provide an immersive and interactive experience for students. Experiential learning is an essential component of the EHS experience. Here at EHS, our students are encouraged to explore ways in which they may learn through direct experience via internships, study abroad, undergraduate research, and other experiential learning options, which offer valuable opportunities to apply classroom knowledge to real-world situations.

COLLEGE OF CREATIVE ARTS

CCA programs offer professional-level experiences through our strong relationships with community organizations and alumni. Real-world learning opportunities mean actually working alongside practicing creatives in their fields. The College of Creative Arts is the home and partner to innovative programs that cross disciplines, allowing our students to pursue an array of interests to augment and expand their knowledge base. Connecting disciplinary skills in the arts and design with areas such as business, community engagement, media, and others leads to flexibility that can enhance both educational and career opportunities.

COLLEGE OF LIBERAL ARTS AND APPLIED SCIENCE (CLAA)

The College of Liberal Arts and Applied Science currently offers 30+ forward-focused majors across Miami’s Regional locations and online, plus pathways to 100+ majors that may be completed at the Oxford campus. Small class sizes, on-site child care, and flexible scheduling make Miami Regionals attractive to students at all stages of life and career.

FARMER SCHOOL OF BUSINESS EXPERIENTIAL LEARNING

We believe that learning should not be limited to classrooms, textbooks and lectures. For more than forty years, we have provided our students with multiple hands-on learning options; in the classroom, on campus, in competitions with other universities, and in other countries. These real world experiences are invaluable opportunities for our students to apply the skills they have acquired at the Farmer School and learn to work collaboratively.
PRESENTERS INDEX BY STUDENT LAST NAME

Reminder: Please check event locations on day of the event.

PLENARY, THEMED PANEL DISCUSSIONS
Heritage Room Shriver 3rd Floor

POSTER PRESENTATIONS AND CENTER AND RESEARCH SHOWCASE
Shriver 2nd Floor

TEN MINUTES TALKS

<table>
<thead>
<tr>
<th>Session</th>
<th>Session Duration</th>
<th>Rooms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Session I</td>
<td>9:00 - 10:30 a.m.</td>
<td>Caroline Scott/Bystrom</td>
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<tr>
<td>Session II</td>
<td>10:45 - 11:45 a.m.</td>
<td>Caroline Scott/Bystrom</td>
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<tr>
<td>Session III</td>
<td>11:45 - 12:45 p.m.</td>
<td>Caroline Scott/Bystrom</td>
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<td>Session IV</td>
<td>1:00 - 2:00 p.m.</td>
<td>Caroline Scott/Bystrom</td>
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</table>

As courtesy to Ten Minute Talk Presenters, please enter the sessions during the 30 minute break and stay for the entire hour.

LARGE FORMAT POSTER SESSIONS

<table>
<thead>
<tr>
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<th>Room</th>
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<td>9:00 - 10:30 a.m.</td>
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<tr>
<td>Session B</td>
<td>1:00 - 2:30 p.m.</td>
<td>JDOL</td>
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<tr>
<td>Session C</td>
<td>3:00 - 4:30 p.m.</td>
<td>JDOL</td>
</tr>
</tbody>
</table>

Poster presenters will be with their poster during their assigned 90 minute session.

To support undergraduate research at Miami, please contact:

Miami University, Director of Development
725 East Chestnut, Oxford, OH 45056
513-529-9260

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<table>
<thead>
<tr>
<th>LAST NAME</th>
<th>FIRST NAME</th>
<th>TYPE</th>
<th>SESSION</th>
<th>ROOM/ ORAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capella</td>
<td>Ben</td>
<td>Poster</td>
<td>A</td>
<td>25</td>
</tr>
<tr>
<td>Carter</td>
<td>Paul</td>
<td>Poster</td>
<td>B</td>
<td>17</td>
</tr>
<tr>
<td>Carvoun</td>
<td>Harrison</td>
<td>Poster*</td>
<td>B</td>
<td>20</td>
</tr>
<tr>
<td>Castaneda Celabos</td>
<td>Marieleys Poster*</td>
<td>C</td>
<td>59</td>
<td></td>
</tr>
<tr>
<td>Catino</td>
<td>Hailey</td>
<td>Poster</td>
<td>C</td>
<td>13</td>
</tr>
<tr>
<td>Caudill</td>
<td>Katie</td>
<td>Poster*</td>
<td>A</td>
<td>33</td>
</tr>
<tr>
<td>Chadd</td>
<td>Katharine</td>
<td>Poster</td>
<td>B</td>
<td>07</td>
</tr>
<tr>
<td>Chadwick</td>
<td>Griffin</td>
<td>Poster*</td>
<td>C</td>
<td>01</td>
</tr>
<tr>
<td>Champagne</td>
<td>Ben</td>
<td>Poster</td>
<td>B</td>
<td>17</td>
</tr>
<tr>
<td>Chapadia</td>
<td>Bumi</td>
<td>Poster</td>
<td>A</td>
<td>14</td>
</tr>
<tr>
<td>Chatty</td>
<td>El</td>
<td>Ten-Min Oral</td>
<td>IV</td>
<td>Bystrom</td>
</tr>
<tr>
<td>Christmon</td>
<td>Gabrielle</td>
<td>Poster</td>
<td>A</td>
<td>60</td>
</tr>
<tr>
<td>Clemens</td>
<td>Liz</td>
<td>Poster</td>
<td>B</td>
<td>54</td>
</tr>
<tr>
<td>Coburn</td>
<td>Cayla</td>
<td>Poster*</td>
<td>C</td>
<td>06</td>
</tr>
<tr>
<td>Coffman</td>
<td>Alexandria</td>
<td>Poster*</td>
<td>B</td>
<td>03</td>
</tr>
<tr>
<td>Cole-Kwell</td>
<td>Monsol</td>
<td>Ten-Min Oral</td>
<td>III</td>
<td>Bystrom</td>
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<td>Collamer</td>
<td>Ian</td>
<td>Poster</td>
<td>A-B-C</td>
<td>26</td>
</tr>
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<td>Collamer</td>
<td>Ian</td>
<td>Poster</td>
<td>C</td>
<td>26</td>
</tr>
<tr>
<td>Colombe</td>
<td>Brianna</td>
<td>Poster</td>
<td>C</td>
<td>08</td>
</tr>
<tr>
<td>Cook</td>
<td>Lauryn</td>
<td>Poster*</td>
<td>A</td>
<td>36</td>
</tr>
<tr>
<td>Cook</td>
<td>Lauryn</td>
<td>Poster*</td>
<td>B</td>
<td>53</td>
</tr>
<tr>
<td>Coon</td>
<td>Hunter</td>
<td>Poster*</td>
<td>A</td>
<td>27</td>
</tr>
<tr>
<td>Cooper</td>
<td>Eike</td>
<td>Ten-Min Oral</td>
<td>IV</td>
<td>Caroline Scott</td>
</tr>
<tr>
<td>Core</td>
<td>Lindsey</td>
<td>Poster*</td>
<td>A</td>
<td>07</td>
</tr>
<tr>
<td>Craig</td>
<td>Katie</td>
<td>Poster</td>
<td>B</td>
<td>07</td>
</tr>
<tr>
<td>Craycraft</td>
<td>Hayley</td>
<td>Poster</td>
<td>A-B-C</td>
<td>26</td>
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<td>Hayley</td>
<td>Poster</td>
<td>C</td>
<td>26</td>
</tr>
<tr>
<td>Creeden</td>
<td>Rachel</td>
<td>Poster</td>
<td>B</td>
<td>41</td>
</tr>
<tr>
<td>Cutchit</td>
<td>Charlotte</td>
<td>Poster</td>
<td>C</td>
<td>46</td>
</tr>
<tr>
<td>Danielson</td>
<td>Evan</td>
<td>Poster*</td>
<td>B</td>
<td>17</td>
</tr>
<tr>
<td>Dani</td>
<td>Hannah</td>
<td>Poster</td>
<td>C</td>
<td>46</td>
</tr>
<tr>
<td>Davidson</td>
<td>Lily</td>
<td>Ten-Min Oral</td>
<td>IV</td>
<td>Caroline Scott</td>
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<td>Poster*</td>
<td>C</td>
<td>48</td>
</tr>
<tr>
<td>Dawson</td>
<td>Gabrielle</td>
<td>Ten-Min Oral</td>
<td>II</td>
<td>Bystrom</td>
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<td>Poster</td>
<td>B</td>
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* primary presenter

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</tbody>
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### PRESENTERS INDEX BY STUDENT LAST NAME

<table>
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<tr>
<th>LAST NAME</th>
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<th>TYPE</th>
<th>SESSION</th>
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</table>

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