



Student as Scholar

**THE 29TH ANNUAL
UNDERGRADUATE RESEARCH FORUM**

APRIL 19, 2023



Letter from the Crawfords



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 325 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 52 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

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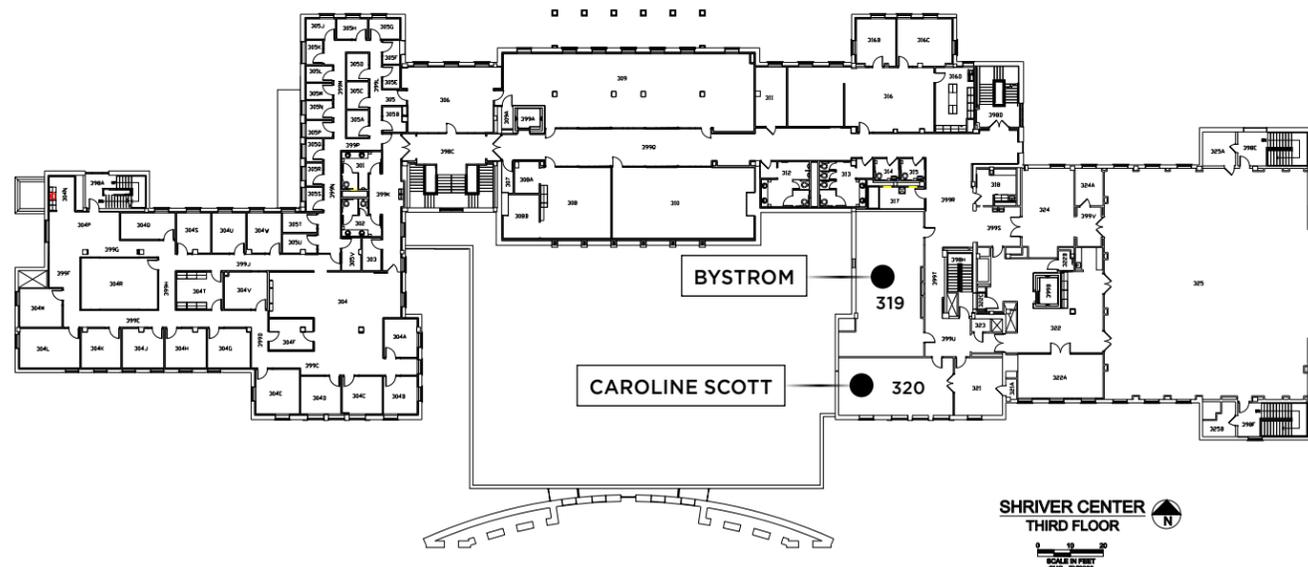
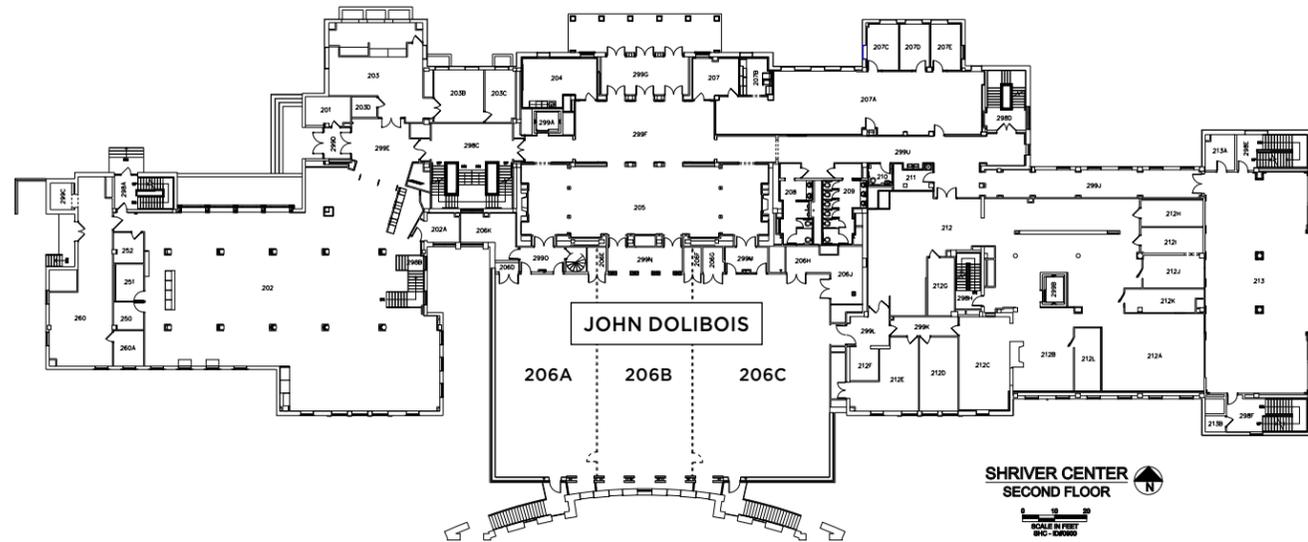
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Miami University 29th Annual Undergraduate Research Forum

WEDNESDAY APRIL 19, 2023

MIAMI UNIVERSITY SHRIVER CENTER



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 3:00 – 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

Undergraduate Research Forum 2023 Sponsors

Office of Research for Undergraduates

Provost and President

Office of Research and Innovation

ASPIRE-Advance strategy, partnerships, institutional relationships, and the economy

UNIVERSITY CENTERS AND RESEARCH SUPPORT SHOWCASE

Wednesday, April 19, 2023

Shriver Center John Dolibois Rooms (JDOL)

CENTER AND CONTACT DETAILS	DESCRIPTION	SESSION TIMES
Cecilia Berg Center for Environmental Education Julia Robinson <i>Director</i> robins48@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 Hefner 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 Oestreicher <i>Director</i> oestrezw@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 <i>Director</i> @scovildj@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 <i>Director</i> CBF@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 undergrads 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 epMotion 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.

UNIVERSITY CENTERS AND RESEARCH SUPPORT SHOWCASE

Wednesday, April 19, 2023

Shriver Center John Dolibois Rooms (JDOL)

CENTER AND CONTACT DETAILS	DESCRIPTION	SESSION TIMES
The Center for Career Exploration and Success Beth Zink	The Center for Career Exploration and Success is a resource for all students involved in research opportunities. We assist students with their application documents and interviewing skills prior to finding a research experience. The Career Center also works to help students communicate the skills and experience gained through their research. The Career Center offers Research and Internship Grants to help students offset personal costs affiliated with research completion. Research skills and experience provide benefits to students both during and after college and can help students identify career paths of interest by testing out the function of research in the world.	Session A 9 – 10:30 a.m. Session B 1 – 2:30 p.m. Session C 3 – 4:30 p.m.
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 <i>Associate Director</i> bushkr2@MiamiOH.edu Debra Robison <i>Project Administrator</i>	The Center for School-Based Mental Health Programs (CSBMHP) in the Psychology department University is committed to ongoing 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 <i>Director</i> harrisyr@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) <i>Co-directors:</i> Chris Wolfe wolfecr@MiamiOH.edu Kevin Bush Chris Sutter CHDLT@MiamiOH.edu	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)

CENTER AND CONTACT DETAILS	DESCRIPTION	SESSION TIMES
Geospatial Analysis Center MUGAC@MiamiOH.edu Robbyn Abbitt <i>Director</i> abitttrj@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 <i>Director</i> 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 <i>Coordinator</i> 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 Guinigundo <i>Director of Global Partnerships</i>	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 CENTERS AND RESEARCH SUPPORT SHOWCASE

Wednesday, April 19, 2023

Shriver Center John Dolibois Rooms (JDOL)

CENTER AND CONTACT DETAILS	DESCRIPTION	SESSION TIMES
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 <i>Assistant Director for Academic Programs and Research Support</i> jansselm@MiamiOH.edu Shawn Vanness dubbersa@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 Mukaddaskhonov, 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

Corinne 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
Nelchi Prashali, Department of Biology

Examining the Effect of Genetic Manipulation on Nerve Remodeling and Eclosion Behavior in Drosophila melanogaster

Laila Haidar, Art & Architecture History, and Anthropology Major

Advisor(s): Annie Dell'Aria, Department of Art
Teresa Ries & "The Witch": An Erased Icon of Early Feminist Art

Session I

Caroline Scott Room
9:30 – 10:30 a.m.

Session Moderator

Odunayo Ayodele, Department of Biology

Reilly Powers, Art Education and Studio Art Major

Advisor(s): Stephanie Danker, Department of Art
Radical Learning; Community Arts and Social Impacts

Madeline Webber, Speech Pathology & Audiology and Premedical Studies Major

Advisor(s): Christopher Beer, Department of Physics
The Effect of Ambient Noise Within a Vehicle on the Audibility of Safety Sirens

Emma Bonnicksen, International Studies Major, and German minor

Advisor(s): Mila Ganeva, Department of German
Displaced Germans: Exile and Trauma in East Asia (1920s-1940s)

Kate Brand, Psychology and Biology Major

Advisor(s): Jennifer Quinn, Department of Psychology
Brianna Minshall, Department of Psychology
Effects of Acute Early Life Stress and CRH2 Receptor Antagonism on Anxiety in Adult Rats

Mia Forte, Art Education Major

William McKay, Art Education Major

Advisor(s): Stephanie Danker, Department of Art
Experiencing Cultural Appreciation

TEN-MINUTE TALKS

Wednesday, April 19, 2023

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

Katy Mevis, Bioengineering Major

Gabrielle Dawson, Physics Major

Advisor(s): Jennifer Blue, Department of Physics

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

Elise Belanger, Mechanical Engineering and Engineering Physics Major

Hunter Reeling, Mechanical Engineering Major

Advisor(s): Jinjuan She, Department of Mechanical and Manufacturing Engineering

Improving Syntax Correctness and Breadth of Design Space Exploration in Functional Analysis

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): Katia Del Rio-Tsonis, Department of Biology
Sophia Ratvasky, Department of Biology

Characterizing the Lens Regeneration Process in Pleurodeles waltl

Ella Morales, Zoology Major

Monsol Cole-Kweli, Computer Science Major

Jack Reed, Computer Science Major

Sarah Jarvis, Computer Science Major

Composting On a Large Scale

TEN-MINUTE TALKS

Wednesday, April 19, 2023

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

Amanda Reichert, Department of Psychology

Jacob Dowell, Department of Psychology

Effect of μ -Opioid Receptor Knockout on Fear Conditioning, Extinction, and Morphine-Analgesia

Ava Loria, Biology Major

El Chetty, Biology Major

Gabriela Ford, Biology Major

Josie Nchinda, Biology Major

Acidification of Drinking Water

Session IV

Caroline Scott Room
2:30 – 3:30 p.m.

Session Moderators:

Kevin Morrison, Department of Chemistry and Biochemistry
Grace Brock, Department of Biology

Elea Cooper, Biology Major

Advisor(s): David Gorchov, Department of Biology

Estimating Deer Population and Impacts in Miami University Natural Areas

Shannen McIntyre-Quinn, Biology Major

Advisor(s): Richard Moore, Department of Biology

Deannah Neupert, Department of Biology

*A Study of the Effects of Light Intensity on Plant Architecture and Reproductive Potential in *Mimulus gemmiparus**

Alivia O'Donnell, Biology Premedical Studies Major

Lily Davidson, Public Health and Premedical Studies Major

Implications of Maternal Opioid Exposure on Neonatal Health Outcomes in the United States

Chanakya Pandya, Physics and Computer Science Major

Advisor(s): Samir Bali, Department of Physics

Daniel Wingert, Department of Physics

2D Ratcheting of Cold Atoms

Harshavardhan Sanaka, Biology and Premedical Studies Major

Advisor(s): Katia Del Rio-Tsonis, Department of Biology

José Raúl Pérez-Estrada, Department of Biology

Role of Hypoxia on Chick Retinal Pigment Epithelium Reprogramming

POSTER PRESENTATION LISTING BY POSTER NUMBER

Wednesday, April 19, 2023

John Dolibois Room

SESSION A

9:00 – 10:30 a.m.

A01 Abigail Meikle, Psychology and Premedical Studies Major
Advisor(s): Rose Marie Ward, Department of Psychology
Rachel Geyer, Department of Psychology
Anxiety Sensitivity and Blackouts: Exploring the Impact of Drinking Motives and Gender Experiences in College-Aged Students

A02 Maya Nathan, Psychology and Premedical Studies Major
Advisor(s): Rose Marie Ward, Department of Kinesiology, Nutrition and Health
Time to BeReal About College Students Posting Alcohol and Its Effects on Drinking Behaviors and FOMO

A03 Julia Razavi, Biology and Premedical Studies Major
Advisor(s): Rose Marie Ward, Department of Psychology
What Does It Take to Change? Negative Drinking Consequences and Willingness to Change Drinking Behavior in College Students

A04 William Gregor, Botany Major
Advisor(s): Richard Moore, Department of Biology
*Differential Expression of Cysteine Proteases in *Carica papaya**

A05 Megan Keyser, Botany and Premedical Studies Major
Advisor(s): Richard Moore, Department of Biology
Evan Gallagher, Department of Biology
*Distinguishing Species-Specific Pollen Differences in Genus *Vasconcellea* of the Papaya Family*

A06 Joelle Roth, Public Health and Premedical Studies Major
Katie Beckman, Public Health Major
Advisor(s): Saruna Ghimire, Department of Sociology and Gerontology
Relationship Between Taking Female Hormones and Depression in Women of Reproductive Age: A Cross-Sectional Study

A07 Lindsey Core, Individualized Studies Major
Advisor(s): Kelsey Ellis, Department of Anthropology
Chris Myers, Department of Biology
Comparing Social Dynamics Between Three Troops of Captive Western Lowland Gorillas

A08 Elisabeth Frank, Anthropology and Zoology Major
Advisor(s): Kelsey Ellis, Department of Anthropology
Non-maternal Adult- And Subadult-Infant Interactions in Wild Woolly Monkeys

A09 Katherine Kingsbury, Speech Pathology & Audiology Major
Grace Koenig, Speech Pathology & Audiology Major
Advisor(s): Aaron Shield, Department of Speech Pathology and Audiology
Kaleigh Hollyday, Department of Speech Pathology and Audiology
Attention-Getting Strategies Used by Hearing Parents with Their Autistic Children

A10 Hannah Seinfeld, Speech Pathology & Audiology Major
Advisor(s): Arnold Olszewski, Department of Speech Pathology and Audiology
Inclusivity in Syntax and Grammar Apps for Educational and Instructional App Usage

A11 Nobia Hailu, Public Health and Premedical Studies Major
Advisor(s): Saruna Ghimire, Department of Sociology and Gerontology
Volatile Organic Compounds and Cancer in adults: Cross-sectional Study

A12 Beth Allen, Chemistry and Public Health Major
Abby Sopiartz, Public Health and Music Major
Advisor(s): Saruna Ghimire, Department of Sociology and Gerontology
The Effects of Hormonal Birth Control on Depression in Women

A13 Maggie Dicks, Biology and Public Health Major
Megan Louttit, Public Health Major
Advisor(s): Saruna Ghimire, Department of Sociology and Gerontology
The Effect of Education Level on HPV Immunization Status in the United States: A Cross-sectional Study

A14 Madison Miner, Public Health and Premedical Studies Major
Bunsi Chapadia, Public Health and Premedical Studies Major
Advisor(s): Saruna Ghimire, Department of Sociology and Gerontology
Racial and Ethnic Disparities Regarding Food Stamp Usage in United States Households

POSTER PRESENTATION LISTING BY POSTER NUMBER

SESSION A
9:00 – 10:30 a.m.

Wednesday, April 19, 2023
John Dolibois Room

- A15** **Abby Gerold**, Public Health and Strategic Communication Major
Sarah Quinlivan, Public Health and Kinesiology Major
Advisor(s): Saruna Ghimire, Department of Sociology and Gerontology
Depression and Sleep Disorders in Adults Aged 20+: a Cross-sectional Study
- A16** **Madison Vedda**, Psychology Major
Advisor(s): Nadia Al-Dajani, Department of Psychology
Involuntary Hospitalization for a Suicidal Crisis in Adolescents: A Review of Lived Experiences and Alternative Practices
- A17** **Sarah Lett**, Psychology and Nutrition Major
Mallory Miller, Psychology and Neuroscience Major
Isabella Speranza, Psychology Major
Emily Weinstein, Psychology Major
Advisor(s): Joseph Johnson, Department of Psychology
Lauren Davidson, Department of Psychology
Elizabeth Pettit, Department of Psychology
Choice Modeling Framework: Snack Food Decisions Among College Students
- A18** **Grace Runge**, Biology, Data Analytics, and Neuroscience Major
William Hertz, Biochemistry Major
Advisor(s): Matthew McMurray, Department of Psychology
Enzymatic Conversion of Psilocybin and Related Tryptamines by Alkaline Phosphatase and Monoamine Oxidase A
- A19** **Serina Gogusoglu**, Biochemistry and Neuroscience Major
Advisor(s): Jennifer Quinn, Department of Psychology
Amanda Reichert, Department of Psychology
The Role of the Paraventricular Nucleus of the Thalamus in the Expression of Safety Learning
- A20** **Christina Fligner**, Inclusive Special Education Major
Advisor(s): Sarah Watt, Department of Educational Psychology
Examining Ohio House Bill 436: Screening and Intervention for Children with Dyslexia
- A21** **Natalie Shand**, Psychology Major
Advisor(s): Anna Radke, Department of Psychology
Thomas Perry, Department of Psychology
Amygdala Intercalated Neuron Contributions to Alcohol Drinking Behavior
- A22** **Mary Durfee**, Zoology and Premedical Studies Major
Delainey Lewis, Psychology Major
Kat Pikus, 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** **Cassidy Waldrep**, 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 Statistics Usage in Undergraduate Neuroscience Education

POSTER PRESENTATION LISTING BY POSTER NUMBER

Wednesday, April 19, 2023
John Dolibois Room

SESSION A
9:00 – 10:30 a.m.

- A26** **Katie Oakes**, 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
Mysidia Leff, Biology Major
Ava Loria, Biology Major
Meet Patel, Microbiology Major
Madelyn Soder, Biology Major
Liv Weintraut, Biology Major
Alex Wyckoff, 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 foliorum 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 Phycosphere Communities
- A28** **Connor Wasmund**, Microbiology Major
Advisor(s): Rachael Morgan-Kiss, Department of Microbiology
Devon Popson, Department of Microbiology
The Impact of Elevated Salinity on Palmelloid Formation and Disruption in Chlamydomonas Species
- A29** **Ethan Finke**, Biochemistry Major
Advisor(s): Rick Page, Department of Chemistry and Biochemistry
Characterization New Delhi Mutant Metallo 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 Performance Major
Advisor(s): Haifei Shi, Department of Biology
Flora Xi, Department of Biology
Effects of Estrogen 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
Aleks Gawronska, Department of Geology & Environmental Earth Science
Alex Schweitzer, Department of Geology & Environmental Earth Science
What Can Symplectites 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 Eclogites During Tectonic Slicing 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

POSTER PRESENTATION LISTING BY POSTER NUMBER

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' Malfunction 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-Phenylene Based Foldamer Cages
- A38 Nikolas 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): Tammie 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
Jaanak Patel, Microbiology and Biology Major
Advisor(s): Rachael Morgan-Kiss, Department of Microbiology
MBI475: The Effects of Environmental Stressors on Antarctic Algae
- A43 Joseph Morgan**, Microbiology Major
Advisor(s): Rachael Morgan-Kiss, Department of Microbiology
Actinobacteria and Their Link to Unique Microbial Ecosystems in the Taylor Dry Valleys, Antarctica
- A44 Eva Williams**, Environmental Earth Science and Sustainability Major
Ben Shrider, Geology Major
Advisor(s): Brian Currie, Department of Geology & Environmental Earth Science
HVSR Analysis of Heterogenous Buried Glacial Valley Deposits, Southwestern Ohio
- A45 Sophie Elleman**, 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: Greening 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 Timsina, Department of Microbiology
Carnitine Degradation in an Isolated Strain of the Gut Bacterium Citrobacter Amalonaticus

POSTER PRESENTATION LISTING BY POSTER NUMBER

Wednesday, April 19, 2023
John Dolibois Room

SESSION A
9:00 – 10:30 a.m.

- A50 Cynthia Fischer**, Applied Biology Major
Advisor(s): Ann Rypstra, 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 Rio-Tsonis, Department of Biology
Erika Grajales Esquivel, Department of Biology
Retina Regeneration in the Spanish Newt
- A53 Abby 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 Chanakya Pandya**, Physics and Computer Science Major
Kai Brown, Physics Major
Advisor(s): Samir Bali, 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
Briana Calloway, Psychology and Premedical Studies Major
Jill Fanning, Geography and Sustainability Major
Advisor(s): Carolyn Craig, DEI and Belonging
Abigail Morgan, Librarian
Mental 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): Carolyn Craig, DEI and Belonging
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

POSTER PRESENTATION LISTING BY POSTER NUMBER

SESSION B
1:00 – 2:30 p.m.

Wednesday, April 19, 2023
John Dolibois Room

- 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): Youngaah Koh, College of Creative Arts
How Diversity, Equity, and Inclusion Principles Influence and are Implemented Within A Local Performing Arts Organization
- B05 Mallory Millet**, Psychology Major
Advisor(s): Rose Marie Ward, Department of Psychology
Akanksha Das, Department of Psychology
The Impact of Belonging to Minority-Based Organizations on Minority Stress Experiences in College
- B06 Gracie Grady**, Political Science Major
Christian Kolianos, Diplomacy and Global Politics Major
Kennedy Withers, English Creative Writing and Media and Culture Major
Brandi Gregg, Psychology Major
Advisor(s): Carolyn Craig, DEI and Belonging
Abigail Morgan, Librarian
Academic Success and Student Involvement
- B07 Kat Pikus**, Psychology Major
Sarah Lett, Psychology and Nutrition Major
Katie Craig, Psychology Major
Tori Dusing, Data Analytics Major
Maddie Reger, Psychology Major
Mallory Miller, Psychology and Neuroscience Major
Emily Weinstein, Psychology Major
Katharine Chadd, Psychology and Economics Major
Isabella Speanza, Psychology Major
Chi Vo, Psychology and Data Science & Statistics Major
Advisor(s): Joseph Johnson, Department of Psychology
Lauren Davidson, Department of Psychology
Elizabeth Pettit, Department of Psychology
Choice Modeling Framework: Snack Food Decisions Among College Students
- B08 August Ogunnowo**, Biology and Neuroscience Major
Advisor(s): Anna Radke, Department of Psychology
Roman Zegarelli, Department of Psychology
Effects of GASP-1 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 Psychedelic 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 Heller, Psychology and Major
Terren Lewis, English Creative Writing and Major
Advisor(s): Carolyn Craig, DEI and Belonging
Abigail Morgan, Librarian
Sense of Belonging in Undergraduate Students at Miami
- B12 Lexie 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

SESSION B
1:00 – 2:30 p.m.

- B13 Megan Robertson**, Zoology and Premedical Studies Major
Natella Parsadanyan, Biology and Neuroscience Major
Mallory Miller, 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 Klumbytė, Department of Anthropology
Legacies of Conflict: Influences on Public Opinion in Germany and Lithuania on the War in Ukraine
- B15 Hannah Gero**, Psychology Major
Advisor(s): Elizabeth Kiel, Department of Psychology
Does Gender Moderate the Relation Between Parasympathetic Regulation and Empathic Behaviors
- B16 Lindsay Douglass**, 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 Tirtadjaja, Chemical and Paper Engineering Major
Advisor(s): Catherine Almquist, Department of Chemical, Paper, and Biomedical Engineering
Jason Berberich, Department of Chemical, Paper, and Biomedical Engineering
Alim Dewan, Department of 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
Keith Hohn, Department of Chemical, Paper, and Biomedical Engineering
Investigation of a Novel Pyrolyzed 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-Opioid expression on FoxP2 Neurons in Aversion-Resistant Drinking
- B21 Hailey Moore**, Psychology Major
Sophie Elleman, 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
Abigale 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 Cahill, 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

SESSION B
1:00 – 2:30 p.m.

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-rich Al(0.85+x)Si(0.15)Fe(2)B(2)
- B25** **Zoe Platow**, Biochemistry and Psychology Major
Advisor(s): Matthew McMurray, Department of Psychology
Effects of Adolescent Lorazepam Exposure on Alcohol Drinking Behavior in Adulthood
- B26** **Katie Oakes**, 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
Mysidia Leff, Biology Major
Ava Loria, Biology Major
Meet Patel, Microbiology Major
Madelyn Soder, Biology Major
Liv Weintraut, Biology Major
Alex Wyckoff, 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 foliorum and Streptomyces lividans
- 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 Fritch, 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 Perminter, 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
MBI 475: 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 Kryziak, Department of Microbiology
Rochelle Pereira, Department of Microbiology
MBI475: Phycosphere 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 Turbid Reservoirs
- B35** **Max Striedl**, Biology Major
Advisor(s): Michael Vanni, Department of Biology
Sedimentation Trends in Acton Lake

POSTER PRESENTATION LISTING BY POSTER NUMBER

Wednesday, April 19, 2023
John Dolibois Room

SESSION B
1:00 – 2:30 p.m.

- B36** **Allie Boyd**, Geography and Biology Major
Advisor(s): John Maingi, Department of Geography
Modeling Habitat Suitability for the Endangered Species, Equus Grevy (Grevy's Zebra)
- B37** **Haley Melton**, Botany Major
Advisor(s): Carolyn Keiffer, 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
Genetic Variability and Lyme Disease Infection in the White-Footed Mouse in Northern Michigan
- B39** **Julia Wojtowicz**, Biology and Premedical Studies Major
Advisor(s): Michael Robinson, Department of Biology
Anil Upreti, Department of Biology
Prediction of Promoters and Enhancers Using Histone Marks on Mouse Lens Epithelium
- 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 Physiological Behaviors
- B41** **Rachel Creeden**, Integrated Science Education Major
Advisor(s): Ellen Yezierski, Department of Chemistry and Biochemistry
KatieMarie Magnone, Department of Chemistry and Biochemistry
Jennifer Ebert, Department of Chemistry and Biochemistry
Multimedia Learning with YouTube: Do Educational Chemistry Videos Cognitively Support Student Learning?
- B42** **Matthew Beckman**, Chemistry Major
Advisor(s): Neil Danielson, Department of Chemistry and Biochemistry
Charles Xie, Department of Chemistry and Biochemistry
Remediation of "Forever Chemicals": Adsorption of PFOA on Novel Polymer Resin

- B43** **Quang Tran**, Chemistry Major
Advisor(s): David Tlerney, Department of Chemistry and Biochemistry
Spin Equilibrium of Cobalt-Salen Complexes
- B44** **Sarah Johnson**, Microbiology and Premedical Studies Major
Shane Schroeder, Computer Science Major
Bella Wilson, Computer Science Major
Advisor(s): Chun Liang, Department of Biology
Predicting the Transmissibility of Emerging SARS-CoV-2 Variants Through Bioinformatic Approaches
- B45** **Sahil Angdembe**, Biology and Premedical Studies Major
Advisor(s): Meixia Zhao, Department of Biology
Determination of Recombination Frequency Between Sexes in a Maize Hybrid
- B46** **Joseph Hasak**, Bioengineering Major
Advisor(s): Karthik Vishwanath, Department of Physics
Diffuse Correlation Spectroscopy using FX3 board and FFT-based Autocorrelation
- 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
The Relationship Between Female Hormone Usage and Pelvic Inflammatory Disease
- B48** **Meghana Sugoora**, Biology Major
Advisor(s): Andrea Kravats, Department of Chemistry and Biochemistry
Ikponwmosa Obaseki, Department of Chemistry and Biochemistry
Yaa Sarfowah 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 Relation Between Sensory Input and Alcohol Drinking Patterns in College Students

POSTER PRESENTATION LISTING BY POSTER NUMBER

SESSION B
1:00 – 2:30 p.m.

Wednesday, April 19, 2023
John Dolibois Room

- 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 Lauryn Cook**, Biochemistry and Public Health Major
Claire Sanford, Public Health Major
Advisor(s): Saruna Ghimire, Department of Sociology and Gerontology
Schedule I and II Drug Usage Effects on Excessive Alcohol Consumption
- B53 Sam Streberger**, Public Health Major
Matt Taverns, 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
Liz 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 Hitchler**, 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 Marusic**, Marketing & Human Capital Management and Leadership Major
Advisor(s): Erik Jensen, Department of History
An Exploration of Benelux 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 Reimueller**, 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
*Vocal Communication and Group Decision Making in Lowland Woolly Monkeys (*Lagothrix lagotricha poeppigii*)*

POSTER PRESENTATION LISTING BY POSTER NUMBER

Wednesday, April 19, 2023
John Dolibois Room

SESSION C
3:00 – 4:30 p.m.

- C01 Griffin Chadwick**, Biology Major
Advisor(s): Jennifer Schumacher, Department of Biology
*Molecular Analysis of *Pendulum Mutants* Presenting with Defects in Heart Valve and Outflow Tract Development*
- C02 Riley Johnson**, Biology and Premedical Studies Major
Anna Medina, Biology Major
Advisor(s): Jennifer Schumacher, Department of Biology
Investigating the Temporal Role of Retinoic Acid Signaling in Cardiac Outflow Tract Development 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
*Evolutionary and Structural Adaptations in the Eye Lens of the Freeze-Tolerant North American Wood Frog (*Rana sylvatica*)*
- C06 Cayla Coburn**, 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 Colombe, Psychology Major
Gabriella Goyer, Psychology Major
Huong 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 Zylko**, 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
Hailey Catino, Public Health and Premedical Studies Major
Advisor(s): Anna Radke, Department of Psychology
Effect of Fentanyl on Anxiety in FMOR Mice with and without the Mu-Opioid Receptor

POSTER PRESENTATION LISTING BY POSTER NUMBER

SESSION C
3:00 – 4:30 p.m.

Wednesday, April 19, 2023
John Dolibois Room

- 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 Beane**, 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
Moth 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 Graff**, 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 Bey**, 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 FOXE3 Knockouts and a Streamlined Protocol for Fluorescent Activated Cell Sorting (FACS)
- C23** **Angelica Vasilatos**, Botany and Environmental Science Major
Advisor(s): Richard Moore, Department of Biology
Ethan Grant, Department of Biology
Floral Color Change in Vasconcellea Parviflora
- C24** **Madison Slosier**, 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 Collamer, Microbiology Major
Hayley Craycraft, Microbiology Major
Gunnar Frechette, Biology Major
Nick Hargett, Microbiology Major
Kavan Jackson, Microbiology Major
Lucy Jones, Microbiology Major
Mysidia Leff, Biology Major
Ava Loria, Biology Major
Meet Patel, Microbiology Major
Madelyn Soder, Biology Major
Liv Weintraut, Biology Major
Alex Wyckoff, 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 foliorum and Streptomyces lividans

POSTER PRESENTATION LISTING BY POSTER NUMBER

Wednesday, April 19, 2023
John Dolibois Room

SESSION C
3:00 – 4:30 p.m.

- C27** **Joel Pantuso-Iwaskewycz**, 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 Wilkes, Microbiology Major
Advisor(s): Rachael Morgan-Kiss, Department of Microbiology
The Effect of Salinity Levels on the Growth of Arctic Lake Algae
- C29** **Colin Gaillot**, Microbiology Major
Chetna Sharma, Microbiology Major
Advisor(s): Rachael Morgan-Kiss, Department of Microbiology
Bradley Kryziak, Department of Microbiology
Rochelle Pereira, Department of Microbiology
MBI575: Attachment of Bacteria to Algae as an Adaptation to Salt Stress in Antarctic Lakes
- C30** **Dom Marichal**, Microbiology Major
Kaylie Wheeless, Microbiology Major
Advisor(s): Rachael Morgan-Kiss, Department of Microbiology
Bradley Kryziak, Department of Microbiology
Rochelle Pereira, Department of Microbiology
MBI575: Effects of Salinity on Microdiversity of Enrichment Cultures at 15 Meters
- C31** **Sabrina Ryland**, Chemistry Major
Morgan Loveday, Chemistry Major
Advisor(s): Ellen Yezierski, Department of Chemistry and Biochemistry
KatieMarie 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** **Melinda Barman**, Chemistry and Science Education Major
Michelle Mancini, Biochemistry Major
Advisor(s): Ellen Yezierski, Department of Chemistry and Biochemistry
KatieMarie Magnone, Department of Chemistry and Biochemistry
Jennifer Ebert, Department of Chemistry and Biochemistry
Revamp, Review, Renew: Developing Codes for YouTube Content Using Updated Mayer's Multimedia Principles
- C33** **Alexis Rothchild**, 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
Kevin 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
Virus Hopping Between Animal and Human: Structural Characterization of Equine g14p[12] Rotavirus via X-Ray Crystallography
- 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

POSTER PRESENTATION LISTING BY POSTER NUMBER

SESSION A
3:00 – 4:30 p.m.

Wednesday, April 19, 2023
John Dolibois Room

- C38 Riley Way**, Chemistry Major
Advisor(s): Dominik Konkolewicz, Department of Chemistry and Biochemistry
Shiwanka Wanasinghe, 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): Shuisong 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 McLain**, Biology and Nutrition Major
Advisor(s): Ann Hagerman, Department of Chemistry and Biochemistry
Meiling 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
Zein 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 Daris, 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): Burcin Bayram, Department of Physics
Time-resolved High-resolution Spectroscopy: Lifetime Measurements of $61\sigma^+$ Electronic State of Na_2 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

POSTER PRESENTATION LISTING BY POSTER NUMBER

Wednesday, April 19, 2023
John Dolibois Room

SESSION C
3:00 – 4:30 p.m.

- 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 Waler, Data Science and Statistics Major
Advisor(s): Tatjana Miljkovic, Department of Statistics
Estimating Confidence Intervals for Risk Measures in Pareto Tails
- C55 Lillian Balderston**, Speech Pathology & Audiology Major
Elise Bossenbroek, 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 Meirielys 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-Tsonis
Mackenzie Farleigh
Joyce Fernandes
Daniel Gladish
Maria Gonzalez
Grajales Esquivel
Ethan Grant
Susan Hoffman
Paul James
Carolyn Keiffer
Kathleen Killian
Andor Kiss
Siva Lakshamana
Vijayarajan
Chun Liang
Richard Moore
Chris Myers
Deannah Neupert
José Raúl Pérez-Estrada

Nelchi Prashali
Sophia Ratvasky
Michael Robinson
David Russell

Ann Rypstra
Alex Salazar
Paul Schaeffer
Jennifer Schumacher
Haifei Shi
Anil Upreti
Matthew Valiga
Michael Vanni
Jacob Weaver
Amy Weber
Flora Xi
Meixia Zhao

BUSINESS + DESIGN AND EMERGING TECHNOLOGY

Michael Bailey-Vankuren

CHEMICAL, PAPER, AND BIOMEDICAL ENGINEERING

Catherine Almquist
Jason Berberich
Alim Dewan
Keith Hohn
Shijie Zhou

CHEMISTRY AND BIOCHEMISTRY

Alison Bates
Philip Boes
Neil Danielson
Meiling Fu

Benjamin Gung
Ann Hagerman
Scott Hartley
Michael Kennedy

Dominik Konkolewicz
Roshan Lama
Gary Lorigan
KatieMarie Magnone
Rock Mancini
Kevin Morrison
Shuisong Ni
Rick Page
Rebecca Stowe
David Tierney
Shiwanka Wanasinghe
Charles Xie
Ruichao Xie
Kevin Yehl
Ellen Yeziarski

CLASSICS

Denise McCoskey

COLLEGE OF CREATIVE ARTS

Youngaah Koh

DIVERSITY, EQUITY, INCLUSION & BELONGING

Carolyn Craig

EDUCATIONAL PSYCHOLOGY

Sarah Watt

FRENCH, ITALIAN AND CLASSICAL STUDIES

Denise McCoskey

GEOGRAPHY

Marcia England
Susan Jakubowski
John Maingi

GEOLOGY & ENVIRONMENTAL EARTH SCIENCE

Brian Currie
Aleks Gawronska
Tammie Gerke
Buchanan Kerswell
Claire McLeod
Abigale O'Connor
Jason Rech
Nanci Reyes-Guzman
Elisabeth Widom

GERMAN

Mila Ganeva

GLOBAL & INTERCULTURAL STUDIES

Sandra Garner

HISTORY

Erik Jensen

INFORMATION SYSTEMS AND ANALYTICS

Fadel Megahed

KINESIOLOGY, NUTRITION AND HEALTH

Helaine Alessio
Karly Geller
Nancy Malay
Beth Miller
Dean Smith
Rose Marie Ward

UNIVERSITY LIBRARIAN

Abigail Morgan

MECHANICAL AND MANUFACTURING ENGINEERING

Jeong-Hoi Koo
Hunter Reeling
Jinjuan She

MICROBIOLOGY

Kelly Abshire
Mitchell Balish
Rebeca Balish
Joseph Carlin
D.J. Ferguson
Kristina Gara
Bradley Kryziak
Elyse Levenda
Rachael Morgan-Kiss
Devon Popson
Roshan Timsina
Meixia Zhao

RESEARCH MENTORS

PHYSICS

Samir Bali
Burcin Bayram
Christopher Beer
Sharmistha
Bhattacharjee
Jennifer Blue
Morgan Davies
Mahmud Khan
Imran Mirza
Karthik Vishwanath
Daniel Wingert

SOCIOLOGY AND GERONTOLOGY

Saruna Ghimire

SPEECH PATHOLOGY AND AUDIOLOGY

Kaleigh Hollyday
Kelly Knollman-Porter
Arnold Olszewski
Donna Scarborough
Aaron Shield

STATISTICS

Donghyung Lee
Tatjana Miljkovic
Pei Wang

PSYCHOLOGY

McKenna Ackon
Nadia Al-Dajani
Akanksha Das
Lauren Davidson
Paul Flaspohler
Rachel Geyer
Joseph Johnson
Amy Kerr
Elizabeth Kiel
Aaron Luebbe
Noelle Marousis
Matthew McMurray
Brianna Minshall
Thomas Perry
Jennifer Quinn
Anna Radke
Vaishali Raval
Amanda Reichert
Oscar Sandoval
Robin Thomas
Rose Marie Ward
Roman Zegarelli

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
Follow us: @MiamiOH_ORU
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)¹
- Administering university-wide undergraduate research programs, such as DUOS, URA, and USS¹¹
- 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

ORU sponsors Miami's Enhanced Institutional Membership in the Council on Undergraduate Research, enabling an unlimited number of our faculty, students, administrators, and staff to join CUR for free.

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/mentors 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

MIAMI UNIVERSITY UNDERGRADUATE RESEARCH OPPORTUNITIES

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-mentored team research project

FYRE Research Tracks are conducted by a combination of faculty, graduate assistants, and undergraduate peer mentors with previous research experience. It is common for representatives from other university offices (e.g., University Libraries, Howe Writing Center) to contribute to instruction in UNV 171 and UNV 172. Additionally, FYRE students may take part in exclusive workshops, colloquia, and other professional development opportunities.

UNDERGRADUATE RESEARCH AWARD (URA)

The ORU provides administrative support to the Miami University Senate Committee on Undergraduate Research.

Since the early 1980's, the university senate has sponsored the URA to provide Miami Undergraduates with faculty-mentored experience in developing grant applications. These partnerships encourage discovery, creative activity and novel, inquiry-based activity. The purpose of these 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.

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 9-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 UNIVERSITY UNDERGRADUATE RESEARCH OPPORTUNITIES

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.

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.

COLLEGE OF LIBERAL ARTS AND APPLIED SCIENCE (CLAAS)

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.

ACKNOWLEDGEMENTS

The Office of Research for Undergraduates (ORU) appreciates the institutional support from staff across the university including Shriver Center Catering and Building Services, IT services, CAS-IT, and the SOURCE student organization and University Libraries for conducting workshops that helped prepare student presenters for the forum. We are particularly grateful this year to University Communications and Marketing for helping to raise the visibility of undergraduate research across divisions. We commend the exemplary efforts of Martha E. Weber, Undergraduate Research Coordinator in the Office of Research for Undergraduates for the many hours of work to manage the details of this signature event.

The Office of Research for Undergraduates (ORU) appreciates the year-long efforts and support of all of the mentors, departments, programs, and divisions who engage with students to foster creativity and research.

The ORU expresses our sincere appreciation to the many faculty, graduate students, and staff members whose continued commitment to prepare students for the forum is vital to the success of this annual event.

We thank Miami University (Office of the President and Provost) for their commitment to support our community's research efforts.

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

Session	Session Duration	Rooms
Session I	9:30 - 10:30 a.m.	Caroline Scott/Bystrom
Session II	10:45 - 11:45 a.m.	Caroline Scott/Bystrom
Session III	1:15 - 2:15 p.m.	Caroline Scott/Bystrom
Session IV	2:30 - 3:30 p.m.	Caroline Scott/Bystrom

As a 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

Session	Session Duration	Room
Session A	9:00 - 10:30 a.m.	JDOL
Session B	1:00 - 2:30 p.m.	JDOL
Session C	3:00 - 4:30 p.m.	JDOL

Poster = primary presenter*

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

LAST NAME	FIRST NAME	TYPE	SESSION	POSTER/ROOM
Abele	Jason	Poster*	A	54
Allen	Beth	Poster*	A	12
Angdembe	Sahil	Poster*	B	45
Arranz	Alvaro	Poster	B	11
Avila	Raychel	Poster	C	59
Balderston	Lillian	Poster*	B	55
Baldwin	Will	Poster	B	17
Barman	Melinda	Poster*	C	32
Bartoszek	Caroline	Poster*	C	35
Bauer	Nicole	Poster	A	25
Beach	Preston	Poster	B	17
Beane	Cambria	Poster*	C	15
Beattie	Brendan	Poster*	A	30
Beckett	Henry	Ten-Min Oral	IV	Bystrom
Beckman	Katie	Poster*	A	06
Beckman	Matthew	Poster*	B	42

LAST NAME	FIRST NAME	TYPE	SESSION	POSTER/ROOM
Belanger	Elise	Ten-Min Oral	II	Bystrom
Bewick	Cole	Poster	C	18
Bey	Hannah	Poster*	C	21
Bonnicksen	Emma	Ten-Min Oral	I	Caroline Scott
Bossenbroek	Elise	Poster	C	55
Boyd	Allie	Poster*	B	36
Brand	Kate	Ten-Min Oral	I	Caroline Scott
Brennan	Ellison	Ten-Min Oral	II	Bystrom
Brown	Kai	Poster	A	57
Bruns VI	Nicolaus	Poster	A	22
Bui	Huy	Poster*	C	34
Cahill	Conor	Poster	B	23
Calloway	Briana	Poster	A	58
Campbell	Mallory	Poster*	A	39
Canter	Maddie	Poster*	A	46
Cao	Shijia	Poster*	C	40

* primary presenter

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PRESENTERS INDEX BY STUDENT LAST NAME

LAST NAME	FIRST NAME	TYPE	SESSION	POSTER/ ROOM
Capella	Ben	Poster	A	25
Carter	Paul	Poster	B	17
Carvour	Harrison	Poster*	B	20
Castaneda Ceballos	Meirielys	Poster*	C	59
Catino	Hailey	Poster	C	13
Caudill	Katie	Poster*	A	33
Chadd	Katharine	Poster	B	07
Chadwick	Griffin	Poster*	C	01
Champagne	Ben	Poster	B	17
Chapadia	Bunsi	Poster	A	14
Chetty	El	Ten-Min Oral	IV	Bystrom
Christmon	Gabrielle	Poster	A	60
Clemens	Liz	Poster	B	54
Coburn	Cayla	Poster*	C	06
Coffman	Alexandria	Poster*	B	03
Cole-Kweli	Monsol	Ten-Min Oral	III	Bystrom
Collamer	Ian	Poster	A-B-C	26
Collamer	Ian	Poster	C	26
Colombe	Brianna	Poster	C	08
Cook	Lauryn	Poster*	A	36
Cook	Lauryn	Poster*	B	52
Coon	Hunter	Poster*	A	27
Cooper	Elea	Ten-Min Oral	IV	Caroline Scott
Core	Lindsey	Poster*	A	07
Craig	Katie	Poster	B	07
Craycraft	Hayley	Poster	A-B-C	26
Craycraft	Hayley	Poster	C	26
Creeden	Rachel	Poster*	B	41
Cutright	Charlotte	Poster	C	46
Danielson	Evan	Poster*	B	17
Daris	Hannah	Poster	C	46
Davidson	Lily	Ten-Min Oral	IV	Caroline Scott
Davies	Morgan	Poster*	C	48
Dawson	Gabrielle	Ten-Min Oral	II	Bystrom
Day	Gretchen	Poster	B	17
DeCapite	Adella	Poster*	B	11
Deeds	Emily	Poster*	C	58
Dennis	Trent	Poster	C	55
Dicks	Maggie	Poster*	A	13
Diddle	Shea	Poster	A	59
Douglass	Lindsay	Poster*	B	16
Draper	Alexa	Ten-Min Oral	II	Bystrom
Durfee	Mary	Poster*	A	22
Dusing	Tori	Poster	B	07
Eccles	Ezra	Poster*	B	19
Elleman	Sophie	Poster*	A	45
Elleman	Sophie	Poster	B	21
Emmert	Noah	Poster*	C	52

* primary presenter

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LAST NAME	FIRST NAME	TYPE	SESSION	POSTER/ ROOM
Erne	Samantha	Poster*	A	30
Ernst	Lake	Poster*	C	25
Esteves	Sofia	Ten-Min Oral	II	Bystrom
Fanning	Jill	Poster	A	58
Fichtner	Angelina	Poster*	B	49
Finke	Ethan	Poster*	A	29
Fischer	Cynthia	Poster*	A	50
Fligner	Christine	Poster*	A	20
Flowers	Sarah	Poster	A	59
Foley	Rachel	Poster	C	08
Ford	Gabriela	Ten-Min Oral	IV	Bystrom
Fornadel	Marissa	Poster*	A	37
Forte	Mia	Ten-Min Oral	I	Caroline Scott
Fowler	Emily	Poster*	C	57
Francis	Katie	Poster*	A	24
Frank	Elisabeth	Poster*	A	08
Frechette	Gunnar	Poster	C	26
Frechette	Gunnar	Poster	A-B-C	26
Fritch	Mikki	Poster	B	28
Gaillot	Colin	Poster*	C	29
Gao	Yingying	Poster*	C	14
Gero	Hannah	Poster*	B	15
Gerold	Abby	Poster*	A	15
Goddard	Tai	Poster	B	17
Gogusoglu	Serina	Poster*	A	19
Gora	Ryan	Poster*	A	49
Goyer	Gabriella	Poster	C	08
Grady	Gracie	Poster*	B	06
Graff	Wolfgang	Poster*	C	18
Greathouse	Ashlee	Poster*	A	47
Green	Abigail	Poster*	A	52
Gregg	Brandi	Poster*	B	06
Gregor	William	Poster*	A	04
Haidar	Laila	Ten-Min Oral	I	Bystrom
Haidle	Grace	Poster*	C	13
Hailu	Nobia	Poster*	A	11
Hall	Madelynn	Poster*	C	11
Hansen	Meredith	Poster*	C	36
Hargett	Nick	Poster	A-B-C	26
Hargett	Nick	Poster	C	26
Harris	AnnaGrace	Poster*	A	60
Hatfield	Julia	Ten-Min Oral	II	Bystrom
Hauman	Jonathan	Poster*	B	34
Haus	Lauren	Poster	C	59
Hazel	Michael	Poster*	C	56
Heller	Daija	Poster	B	11
Henkel	Ronald	Ten-Min Oral	II	Bystrom
Hess	Kelsey	Poster*	B	30

* primary presenter

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LAST NAME	FIRST NAME	TYPE	SESSION	POSTER/ ROOM
Hitchler	Ashley	Poster*	B	55
Hodge	Nya	Poster*	A	59
Holroyd	Jacob	Poster	A	30
Hoover	Emily	Poster	B	32
Horn	Meredith	Poster*	B	28
Hortz	William	Poster	A	18
Ioli	Sophia	Poster*	C	60
Jachim	Katie	Poster	A	60
Jackson	Kavan	Poster	A-B-C	26
Jackson	Kavan	Poster	C	26
James	Lexie	Poster*	B	12
Jarvis	Sarah	Ten-Min Oral	III	Bystrom
Jaworski	Nico	Poster*	B	60
Jefferson	Jules	Poster*	C	43
Johnson	Riley	Poster*	C	02
Johnson	Sarah	Poster	A	53
Johnson	Sarah	Poster*	B	44
Jones	Annemarie	Poster*	A	51
Jones	Lucy	Poster	A-B-C	26
Jones	Lucy	Poster	C	26
Karsten	Eckhardt	Poster*	B	33
Keane	Hope	Poster	C	24
Kehs	Zoe	Poster*	C	16
Kerr	Samuel	Poster*	B	22
Keyser	Megan	Poster*	A	05
Kingsbury	Katherine	Poster*	A	09
Klump	David	Poster	C	18
Kocher	Lindsay	Poster	A	25
Koenig	Grace	Poster	A	09
Kolianos	Christian	Poster*	B	06
Kollar	Kiki	Poster*	C	03
Koo	Grace	Poster*	C	53
Kubican	Sarah	Poster	B	17
Latimer	Hannah	Poster*	A	41
Leff	Mysidia	Poster	A-B-C	26
Leff	Mysidia	Poster	C	26
Lentz	Jillian	Poster*	C	22
Lett	Sarah	Poster*	A	17
Lett	Sarah	Poster	B	07
Lewis	Delainey	Poster	A	22
Lewis	Terren	Poster	B	11
Liang	Luke	Poster*	C	55
Liebes	Nina	Poster*	B	57
Livingston	Adam	Poster	B	38
Long	Steven	Poster*	C	39
Lopez	Claire	Poster	C	13
Loria	Ava	Poster	A-B-C	26
Loria	Ava	Poster	C	26

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LAST NAME	FIRST NAME	TYPE	SESSION	POSTER/ ROOM
Loria	Ava	Ten-Min Oral	IV	Bystrom
Louttit	Megan	Poster	A	13
Louttit	Megan	Poster*	C	07
Loveday	Morgan	Poster	C	31
Lutz	Jessica	Poster	B	17
Lynn	Miles	Poster*	B	50
Maddie	Ranz	Poster	C	46
Mamone	Jack	Poster	A	25
Mancini	Michelle	Poster	C	32
Marichal	Dom	Poster*	C	30
Martinez	Brenda	Poster	C	12
Marusic	Lidia	Poster*	B	56
McClelland	Camryn	Poster*	C	16
McDougall	Hannah	Poster*	C	50
McHugh	Krissy	Poster*	B	47
McIntyre-Quinn	Shannen	Ten-Min Oral	IV	Caroline Scott
McKay	William	Ten-Min Oral	I	Caroline Scott
McLain	Jenna	Poster*	C	42
Medina	Anna	Poster	C	02
Meikle	Abigail	Poster*	A	01
Meinking	Cece	Poster	B	51
Melton	Haley	Poster*	B	37
Mevis	Katy	Ten-Min Oral	II	Bystrom
Meyer	Claire	Poster	A	25
Miesse	Lina	Ten-Min Oral	II	Bystrom
Miller	Eleanor	Ten-Min Oral	III	Bystrom
Miller	Mallory	Poster	A	17
Miller	Mallory	Poster	B	7
Miller	Mallory	Poster	B	13
Millet	Mallory	Poster*	B	05
Miner	Madison	Poster*	A	14
Money	Lana	Poster*	A	58
Montaine-O'Brien	Skyler	Poster*	C	51
Moore	Ally	Poster*	B	32
Moore	Hailey	Poster*	B	21
Morales	Ella	Ten-Min Oral	III	Bystrom
Morgan	Joseph	Poster*	A	43
Morris	Ashley	Poster*	B	14
Morrison	Cameron	Poster*	A	35
Mueller	James	Poster*	B	29
Mukaddaskhonov	Shakhzodkhon	Ten-Min Oral	I	Bystrom
Myers	Aliya	Ten-Min Oral	IV	Bystrom
Nagle	Benjamin	Poster*	A	42
Nathan	Maya	Poster*	A	02
Nazir	Ridha	Poster*	B	54
Nchinda	Josie	Ten-Min Oral	IV	Bystrom
Nettey	Kevin	Poster*	C	47
Newell	Hannah	Poster*	A	48

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LAST NAME	FIRST NAME	TYPE	SESSION	POSTER/ ROOM
Nguyen	Hoang	Poster*	A	40
Nguyen	My	Poster*	B	02
Novits	Brett	Poster*	B	59
Novom	Logan	Poster	A	25
Novom	Logan	Poster*	C	46
O'Donnell	Alivia	Ten-Min Oral	IV	Caroline Scott
Oakes	Katie	Poster*	A-B-C	26
Oakes	Katie	Poster*	C	26
Ochsner	Glenn	Poster*	A	32
Ogunnowo	August	Poster*	B	08
Olp	Rachel	Poster*	B	18
Ovalle	Nataly	Ten-Min Oral	II	Bystrom
Owens	Callie	Poster	A	27
Padilla	Edith	Poster	C	13
Pandya	Chanakya	Poster*	A	57
Pandya	Chanakya	Ten-Min Oral	IV	Caroline Scott
Pantuso-Iwaskewycz	Joel	Poster*	C	27
Parsadanyan	Natella	Poster	B	13
Patel	Jaanak	Poster	A	42
Patel	Meet	Poster	A-B-C	26
Patel	Meet	Poster	C	26
Perminter	Alexis	Poster	B	29
Petulla	Anthony	Poster*	C	17
Pham	Huong	Poster	C	08

LAST NAME	FIRST NAME	TYPE	SESSION	POSTER/ ROOM
Pikus	Kat	Poster	A	22
Pikus	Kat	Poster*	B	07
Platow	Zoe	Poster*	B	25
Powell	Aine	Poster	A	56
Powers	Reilly	Ten-Min Oral	I	Caroline Scott
Quinlivan	Sarah	Poster	A	15
Quinlivan	Sarah	Poster*	B	10
Rahman	Mahir	Poster*	C	49
Razavi	Julia	Poster*	A	03
Rebull	Sofia	Poster*	B	31
Reckers	Caroline	Poster*	A	55
Reed	Jack	Ten-Min Oral	III	Bystrom
Reger	Maddie	Poster	B	07
Reimueller	Kayleigh	Poster*	B	58
Riffe	Jackson	Ten-Min Oral	I	Bystrom
Robertson	Megan	Poster*	B	13
Roemer	Charlotte	Poster	C	12
Rogers	Corinne	Ten-Min Oral	I	Bystrom
Roth	Joelle	Poster*	A	06
Rothchild	Alexis	Poster*	C	33
Runge	Grace	Poster*	A	18
Runge	Grace	Poster	A	25
Rusche	Katy	Poster	A-B-C	26
Rusche	Katy	Poster*	C	08

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LAST NAME	FIRST NAME	TYPE	SESSION	POSTER/ ROOM
Rusche	Katy	Poster	C	26
Ryland	Sabrina	Poster*	C	31
Sanaka	Harshavardhan	Ten-Min Oral	IV	Caroline Scott
Sanford	Claire	Poster	B	52
Sawyer	Ryan	Poster*	B	23
Schaeffer	Charles	Poster*	A	31
Schroeder	Shane	Poster	B	44
Schuckmann	Katie	Poster*	C	20
Sciortino	Jon	Poster*	B	09
Seinfeld	Hannah	Poster*	A	10
Selent	Denali	Poster	B	17
Senger	Joshua	Poster*	B	04
Shand	Natalie	Poster*	A	21
Sharma	Chetna	Poster	C	29
Shrider	Ben	Poster	A	44
Sims	Dwight	Poster*	A	34
Slosier	Madison	Poster*	C	24
Small	Allison	Poster*	C	04
Smith	Abby	Poster*	A	53
Sneller	Lucas	Poster	A	59
Soder	Madelyn	Poster	A-B-C	26
Soder	Madelyn	Poster	C	26
Sooch	Mia	Poster*	C	12
Sopiarz	Abby	Poster	A	12

LAST NAME	FIRST NAME	TYPE	SESSION	POSTER/ ROOM
Soria	Tori	Poster*	B	27
Soria	Tori	Poster	B	47
Speranza	Isabella	Poster	A	17
Speranza	Isabella	Poster	B	07
Stillwell	Kyra	Poster*	B	24
Streberger	Sam	Poster*	B	53
Striedl	Max	Poster*	B	35
Sugoor	Meghana	Poster*	B	48
Szymczak	Alexander	Poster*	C	19
Talty	Maeve	Poster	C	08
Taverns	Matt	Poster	B	53
Thach	Chloe	Poster*	A	23
Tharp	Jayden	Poster*	C	05
Theodoroudis	Gabriella	Ten-Min Oral	III	Bystrom
Thomas	Justus	Poster*	C	54
Thornburg	Taylor	Poster	A	51
Tian	HaoFeng	Poster	C	12
Tirtadjaja	Justin	Poster	B	17
Tonucci	Gabriel	Poster	B	33
Toromani	Gejla	Ten-Min Oral	I	Bystrom
Tran	Corvo	Poster*	B	01
Tran	Quang	Poster*	B	43
Underwood	D'Erick	Poster	B	19
Vargas	Eian	Poster*	C	28

* primary presenter

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LAST NAME	FIRST NAME	TYPE	SESSION	POSTER/ ROOM
Vasilatos	Angelica	Poster*	C	23
Vedda	Madison	Poster*	A	16
Wade	Jasmine	Poster	A	60
Waldrep	Cassidy	Poster*	A	25
Waldrep	Cassidy	Poster*	B	40
Waler	Hannah	Poster	C	54
Walsh	Peter	Poster	A	30
Wang	Haoxing	Poster*	C	37
Wang	Haoxing	Poster	C	44
Wang	Wenshu	Poster	C	37
Wasmund	Connor	Poster*	A	28
Wasson	Jacob	Poster	C	08
Way	Riley	Poster*	C	38
Weaver	Maddie	Ten-Min Oral	IV	Bystrom
Webber	Madeline	Poster*	B	51
Webber	Madeline	Ten-Min Oral	I	Caroline Scott
Weinstein	Emily	Poster	A	17
Weinstein	Emily	Poster	B	07
Weintraut	Liv	Poster	A-B-C	26
Weintraut	Liv	Poster	C	26
Wells	Hunter	Poster*	C	09
Wheless	Kaylie	Poster	C	30
Wilkes	Julia	Poster	C	28
Williams	Eva	Poster*	A	44

LAST NAME	FIRST NAME	TYPE	SESSION	POSTER/ ROOM
Williams	Kathryn	Poster*	C	41
Wilson	Bella	Poster	B	44
Wilson	Margaret	Poster*	A	56
Wilson	Nikolas	Poster*	A	38
Withers	Kennedy	Poster*	B	06
Wittwer	Noelle	Poster*	B	38
Wojtowicz	Julia	Poster*	B	39
Woodward	Connor	Poster	B	23
Wyckoff	Alex	Poster	A-B-C	26
Wyckoff	Alex	Poster	C	26
Vo	Chi	Poster	B	07
Yin	Zhichang	Poster*	C	45
Zhu	Wen Shu	Poster*	C	44
Zylko	Alexia	Poster*	C	10



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Dean and University Librarian



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