ANNUAL MEETING

Sponsored By:

Department of Higher Education




# The Ohio Academy of Science Annual Meeting

## STEM Workforce Development: Building Ohio's STEM Workforce Pipeline

October 23 & 24, 2026

Sponsored By:

Department of Higher Education

# Welcome

Welcome to the 133rd Annual Meeting of The Ohio Academy of Science! This year's theme STEM Workforce Development: Building Ohio's STEM Workforce Pipeline reflects the Academy's commitment to equipping young professionals with the skills, experiences, and networks needed to thrive in a rapidly evolving STEM workforce. This conference represents a powerful opportunity for undergraduate and graduate students, educators, scientists, engineers, and employers from across Ohio to come together in a vibrant regional gathering centered on learning, collaboration, and innovation.

Founded in 1891, The Ohio Academy of Science is Ohio's leading organization to foster curiosity, discovery, and innovation and to unite all who value education, science, engineering, technology, or their applications to benefit society.

On behalf of The Ohio Academy of Science's Board of Trustees, I would like to extend my sincere thanks to this year's planning committee, whose vision and hard work have made this event possible.

The 2026 Annual Meeting was reimagined and supported by the Ohio Department of Higher Education. Thank you, Chancellor Duffey, for having the confidence and foresight for making this 2-day event a reality.

Many thanks to Dr. John Horack for providing this year's keynote address.

Thank you to each of our researchers and those who supported their efforts. We look forward to learning more about your contributions to science and engineering – the lifeblood of the Annual Meeting.

Sincerely,



Michael E. Woytek
Executive Director
The Ohio Academy of Science

# 2026 Annual Meeting Schedule

**Friday, October 23:**

12:30-1:00 PM – Registration
1:15-1:30 PM – Opening Remarks from **Mike Duffey**, Chancellor of the Ohio Department of Higher Education
1:35-2:20 PM – Keynote Address by **Dr. John Horack**, VP for Research at The Ohio State University, *Exploring the Next Frontier: Ohio's Leadership in Opening the 8th Continent*
2:20-2:35 PM – Break
2:40-3:10 PM – Remarks from the **Ohio Supercomputer Center** by **Chase Eyster**, OSC Business Development Manager, and **Dr. Evan Jaffe**, OSC Machine Learning Engineer
3:15-3:45 PM – Design Challenge 1st Place Presentation
3:45-4:00 PM – Break
4:05-4:50 PM – Panel Discussion
**Public Interest Technology**, moderated by **Dr. Daniel Kelley**, Director, Ohio State Battelle Center for Science, Technology, and Public Policy. Panelists:
**Dr. Julienne Long**, Director of Grants and Special Projects, Columbus City Prosecutor's Office
**Dr. Jorge Barrios**, Global Business Development Manager and Geomechanics Advisor, Stratum Reservoir
**Karima Samadi**, Policy Analyst - Food Systems, Center for Public Health Innovation
**Dr. Lisa Frazier**, Assistant Director for Research, OSU Battelle Center for Science, Engineering and Public Policy
4:50-6:30 PM – Networking and Reception

**Saturday, October 24:**

7:30-9:00 AM – Registration
7:30-8:30 AM – Breakfast
8:30-8:40 AM – Welcome from **Michael Woytek**, Executive Director of The Ohio Academy of Science in the conference theater
8:45-9:45 AM – Oral Presentations Session A
9:45-10:00 AM – Break
10:00-11:30 AM – Poster Session – authors with their posters
11:30-12:15 PM – Panel Discussion in the conference theater
**STEM Job Market**, moderated by OAS. Panelists:
**Fred Nyangaresi**, Manager, Talent Analytics, JobsOhio
**Michelle Norris**, Senior Services Specialist, Ohio State Office of Student Life
**Dean Moyer**, Recruitment Operations Specialist, Ohio State College of Engineering
12:15-1:00 PM – Lunch
1:00-2:00 PM – Poster Viewing Session – authors are not required to be at poster
1:30-2:45 PM – Oral Presentations Session B
3:00-3:10 PM – Closing Remarks in the conference theater

# 2026 Welcome Speaker: Mike Duffey, Chancellor of the Ohio Department of Higher Education



Mike Duffey was appointed the 11th Chancellor of the Ohio Department of Higher Education (ODHE) in January 2024. In this role, he oversees the state's two-year and four-year colleges and universities and Ohio Technical Centers. In addition, the Chancellor provides policy guidance to the Governor and the Ohio General Assembly and carries out state higher education policy.

Prior to becoming Chancellor, he served ODHE for five years as Senior Vice Chancellor. He worked on important policies for the administration, including transcript release, student debt release, FAFSA completion, short-term credentials, Ohio's College Comeback initiative, and support for innovation and technology commercialization.

Before joining the department, he served eight years in the Ohio House of Representatives, where he chaired the Higher Education and Workforce committee, vice-chaired the legislature's Joint Committee on College Affordability, and co-chaired the Ohio Tuition Trust Authority.

During his time at ODHE, Chancellor Duffey has served as the Governor's designee on the Midwestern Higher Education Compact. From November 2021 to August 2022, he chaired the State Committee on Computer Science. And from 2019 to 2021, he also served on loan as Deputy Director of InnovateOhio, an initiative led by Lt. Governor Jon Husted in support of innovation and entrepreneurialism.

As State Representative, Mike Duffey sponsored legislation that established the Chancellor's authority to review special fees and the state auditor's authority to conduct performance audits of Ohio's public colleges, and he led efforts to provide voting rights to student trustees. His most well-known legislative act was sponsoring the legislation that created JobsOhio.

Toward the end of his service in the legislature, he became known for initiating the legal theory and evidentiary basis for the state lawsuit that saved the Columbus Crew soccer franchise. For this work, he received the Spirit of Columbus award from The Columbus Foundation.

Chancellor Duffey has a Master of Business Administration from The Ohio State University and a bachelor's degree in political science from the University of Michigan. He and his wife Lindsay, a public school teacher and librarian, live in Worthington. They have two children, Jack and Annie, and two goldendoodles, Comet and Clover.

# 2026 Keynote Speaker: Dr. John M. Horack, Vice President for Research, The Ohio State University

*Exploring the Next Frontier: Ohio's Leadership in Opening the 8th Continent*



John M. Horack is the vice president for research at The Ohio State University where he leads the Enterprise for Research, Innovation and Knowledge (ERIK), overseeing strategic research operations, commercialization and venture initiatives, and collaborative partnerships across the university. A 30-year veteran of the spaceflight industry, he is a globally recognized leader in space-based research, flight hardware development, program management, and space policy in the academic, government and private sectors.

Dr. Horack is the inaugural holder of the Neil Armstrong Chair in Aerospace Policy at Ohio State, with tenured, full-professor appointments in the College of Engineering's Mechanical and Aerospace Engineering department and the John Glenn College of Public Affairs. Prior to joining Ohio State in 2016, he served for four years as vice president of Teledyne Brown Engineering's Space Systems group in Huntsville, Alabama, with responsibility for overseeing all government and commercial Space programs.

From 2009-2012 Dr. Horack served as vice president of research for The University of Alabama in Huntsville. During his tenure theuniversity grew annual research expenditures from $65M to nearly $100 million and moved from an R2 to an R1 institution.

Dr. Horack had an impressive career at NASA's Marshall Space Flight Center (MSFC) having achieved the level of Senior Executive Service. His last position at NASA was as manager of the Science and Mission Systems Office. He has also held the positions of gamma ray astrophysics research scientist; assembly, test, and calibration scientist for the Burst and Transient Source Experiment (BATSE); and resident scientist for spacecraft integration at TRW in Redondo Beach, CA, for assembly and test of the Compton Gamma Ray Observatory, launched in April 1991 aboard Space Shuttle Atlantis.

He began his NASA career in 1987 after graduating from Northwestern University with a BA in physics and astronomy. He earned an MA and PhD in physics from The University of Alabama in Huntsville in 1992 and 1993, respectively.

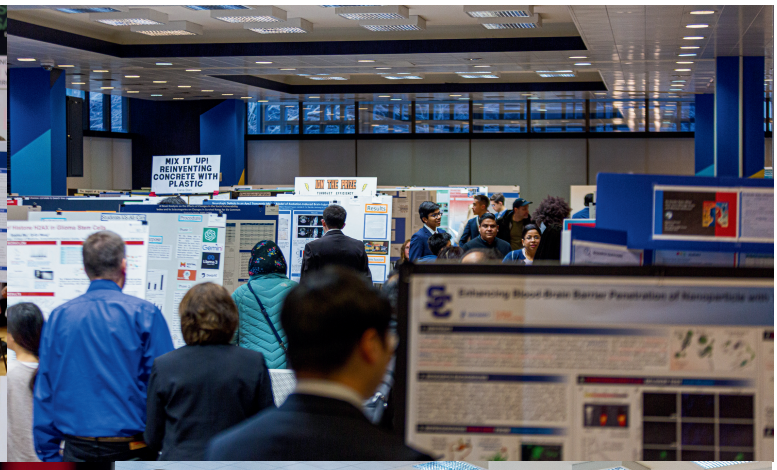
He has authored or co-authored more than 100 papers and conference presentations.

He is a member of the American Association for the Advancement of Science and the American Astronomical Society as well as an Associate Fellow of the American Institute for Aeronautics and Astronautics and Fellow with the Royal Aeronautical Society (UK).

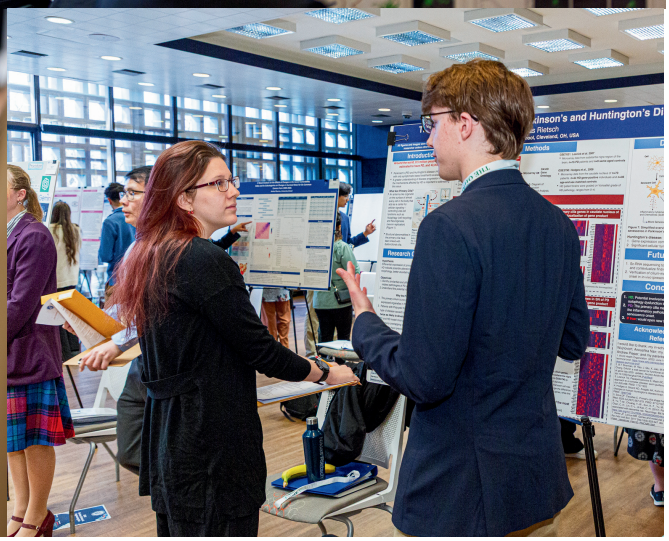
# Thank You to the 2026 Annual Meeting Planning Committee!

**Dr. Claire McLeod**, OAS, Trustee - Associate Professor of Geology & Graduate School Director, Miami University
**Ms. Halle Miller**, OAS Trustee, Associate Director, Partner's Environmental Consulting, Inc.
**Ms. Emily Turner**, Ohio Department of Higher Education, Director, Choose Ohio First
**Dr. Aimee Bross Price**, The Ohio State University, Manager, Nanofabrication
**Mr. Ryan Petitti**, The Ohio State University, Director, Lab Services - CDME
**Ms. Chelsea Treboniak**, Founder, Critical Ops
**Dr. Nava Schottenstein**, Columbus State Community College, Assistant Professor & Site Director Amgen Biotech Experience
**Mr. Michael Woytek**, OAS, Executive Director
**Ms. Aly Gruber**, OAS, Director of Programs
**Mr. Woodie Colley**, OAS, Manager of Programs & Development
**Ms. Dorie Gruber**, OAS, Director of Administration





## About the 2026 Design Challenge

The Data Centers and Critical Infrastructure Design Challenge asked undergraduate and graduate teams to identify a real problem created by the growth of Ohio's data center industry and design a solution for it. Working from a shared set of sourced parameters describing a representative facility in the New Albany International Business Park, teams of four to six students framed a specific problem and defended their solution across four dimensions: the underlying science, the engineering, the logistics of building and operating it, and the environmental and community impact. The team which won first prize is presenting their work today.

## 1st Place Design Challenge Awardees

***Data Centers and Air Quality: Monitoring and Education in New Albany*** - Presented by Anna Scaria, Ashley Khatib, Fayrouz Elgalad, Grace Baldwin, Vincent Kojo, and Dr. Lalita Kaligotla from The Ohio State University.

Project Summary: As New Albany, Ohio, emerges as a major data center hub within the "Silicon Heartland," rapid technological growth has raised concerns about air quality, energy consumption, and environmental impacts. Of particular concern are emissions from nearby power generation facilities, including fine particulate matter ($PM_{2.5}$) and nitrogen dioxide ($NO_2$), which pose potential respiratory and cardiovascular risks to surrounding communities. This project proposes a community-based air quality monitoring network that combines localized sensors, real-time public dashboards, and environmental health education. Through collaboration among The Ohio State University nursing and engineering students, residents, industry leaders, and community organizations, the initiative aims to provide accessible air quality data, improve transparency, and support informed decision-making. By strengthening community partnerships and leveraging AI-enabled tools for data analysis and communication, the project demonstrates how technological innovation can coexist with environmental stewardship and public health protection.

**Oral Presentations**
**Room: Franklin Hamilton**
**Session A – 8:45 – 9:30 AM and B – 1:30 – 2:45 PM**
**Agricultural, Computer Science, Math & Engineering**

8:45 AM Designing With, Not Just For: A Human-Centered Approach to Farmworker Heat Safety
First Author: **Roshan Renney** - Kent State University - rrenney@kent.edu
Advisor: Carla Goar- cgoar@kent.edu

9:00 AM Using LSTM Neural Networks to Emulate the Outputs of DayCent Model
First Author: **Avnaly Alceres** - Central State University - aalceres.csu@centralstate.edu
Additional Authors: Dwij Mehta, mehta423@umn.edu, Vipin Kumar, kumar001@umn.edu, Sakthi Kumaran, ssubburayalu@centralstate.edu
Advisor: Sakthi Kumaran- ssubburayalu@centralstate.edu

9:15 AM Comparative Evaluation of Power Sources for Electric Vertical Takeoff and Landing Aircraft
First Author: **Fahrin Ramisa** - Kent State University - framisa@kent.edu
Additional Authors: Dhruba Panthi, dpanthi@kent.edu

9:30 AM Thickness-Composition Design Rules for MgZnO/$CdSe_{1-x}Te_x$/ZnTe Solar Cells: A SCAPS-1D Study of Performance
First Author: **Anayo Udeh** - The University of Louisiana at Lafayette - anayo.udeh1@louisiana.edu
Advisor: Jonathan Raush- jonathan.raush@louisiana.edu

1:30 PM A Physics-Informed Neural Network (PINN) with Explainable AI (XAI) for Early Prediction of Lithium-Ion Battery Degradation
First Author: **Nur Md Alif Ul Islam** - Bowling Green State University - nurmdau@bgsu.edu
Additional Authors: Nusrat Jahan Nabila, nnabila@bgsu.edu, Md Imran Hasan Tusar, mtusar@bgsu.edu
Advisor: Md Imran Hasan Tusar- mtusar@bgsu.edu

1:45 PM Transformer-Based Forward Model for the Prediction of Agricultural Practices
First Author: **Aliyah Ferguson** - Central State University - aferguson1.CSU@centralstate.edu
Additional Authors: Sepideh Fatemi, sepidehfatemi@vt.edu, Anuj Karpatne, karpatne@vt.edu, Sakthi Kumaran, ssubburayalu@centralstate.edu
Advisor: Sakthi Kumaran- ssubburayalu@centralstate.edu

2:00 PM Preparing Computer Science Students for Career Success in a Changing Society
First Author: **Li Feng** - Capital University - lfeng@capital.edu

2:15 PM Multi-Agent Reinforcement Learning for Mixed-Model Production Scheduling
First Author: **Nusrat Jahan Nabila** - Bowling Green State University - nnabila@bgsu.edu
Additional Authors: Nur Md Alif Ul Islam, nurmdau@bgsu.edu, Md Imran Hasan Tusar, mtusar@bgsu.edu
Advisor: Md Imran Hasan Tusar- mtusar@bgsu.edu

2:30 PM Next Engineers: Building a STEM Workforce Pipeline in Ohio
First Author: **Kyle Turner** - University of Cincinnati - turnekj@ucmail.uc.edu

**Oral Presentations**
**Room: Hancock**
**Session A – 8:45 – 9:30 AM and B – 1:30 – 2:45 PM**
**Biological & Biomedical Sciences**

8:45 AM Nanobodies from Nanomice Targeting the Cedar virus Attachment glycoprotein Potently Neutralize Viral Infection
First Author: **Junping Hong** - The Ohio State University - hong.1267@osu.edu

9:00 AM Targeting CCR5 as a Potential Therapy for Neuroinflammation Pathology
First Author: **Antonio Castro** - Lorain County Community College - a.castro14@mail.loraincccc.edu
Additional Authors: Harry Kestler, hkestler@loraincccc.edu, Hannah Newsome, hannah.newsome215@gmail.com
Advisor: Harry Kestler- hkestler@loraincccc.edu

9:15 AM Outcomes of Methamphetamine versus Cocaine Associated Cardiomyopathy
First Author: **Shahed Abukhalil** - Cleveland State University - 2916926@vikes.csuohio.edu
Additional Authors: Yusef Saed, Yusef.Saeed@UHhospitals.org, Christopher Mishreky, Christopher.Mishreky@uhhospitals.org, Sabin Lama, Sabin.Lama@uhhospitals.org, Shahed Abukhalil, 2916926@vikes.csu.edu

9:30 AM Evaluating the Role of CCR5 in Substance Use Disorder
First Author: **Steven Laing** - Lorain County Community College - s.laing1@mail.loraincccc.edu
Advisor: Harry Kestler- hkestler@loraincccc.edu

9:45 AM No Frog Wasted: Road Salvage for Studies of Muscle Physiology
First Author: **Mitchell Mazzone** - The Ohio State University - mazzone.31@osu.edu
Advisor: Paul Andreadis- andreadis.4@osu.edu

1:45 PM Non-Credit to Credit: Ohio Life Sciences Biotechnology Bootcamp
First Author: **Natalia Colvin** - Columbus State Community College - nkolnik@cscc.edu

2:00 PM Ontogenic Variation of Bull Shark, *Carcharhinus leucas*, Diet in the North Central Gulf of Mexico
First Author: **Rachel Hoose** - Bowling Green State University - rhoose@bgsu.edu
Additional Authors: Wade Hill, Wade.Hill@mma.edu, Anna Millender, Anna.Millender@usm.edu, Lindsay Bomgardner lbomgardner01@gmail.com, Angie Hoover, angie.hoover19@gmail.com, Jill Hendon, Jill.Hendon@usm.edu, Jeremy Higgs, J.Higgs@usm.edu

2:15 PM Screening for Amyloid Deposits in Aging Pigeon Brains
First Author: **Justin Reed** - University of Findlay - reedj8@findlay.edu
Additional Authors: Danica Henderson, Hendersond1@findlay.edu, Lucille Snoke, Snokel@findlay.edu
Advisor: Vincent Coppola- vincent.coppola@findlay.edu

2:30 PM Comparing the Effects of Different Alcohols on Wound Healing in HaCaT Cells
First Author: **Kyle Rucker** - Marietta College - ruckerkyle1@gmail.com
Advisor: Kimberly George- ksg001@marietta.edu

**Oral Presentations**
**Room: Alumni Lounge**
**Session A – 8:45 – 9:30 AM and B – 1:30 – 2:45 PM**
**Behavioral & Social Sciences**
**Chemistry & Material Sciences**

8:45 AM Caregiver Burden in Cat Owners: A Qualitative Study of Chronic Illness Management
First Author: **Matt Fellows** - Kent State University - mfellow6@kent.edu
Additional Authors: Nikki Bennett, nbenne15@kent.edu, Margaret Gober, margaret.gober@zoetis.com, Mary Beth Spitznagel, mspitzna@kent.edu
Advisor: Mary Beth Spitznagel- mspitzna@kent.edu

9:00 AM Exploring the Perceptions of General and Special Educators on K–3 Students' Exposure to STEM and STEAM Curricula: A Qualitative Exploratory Case Study in Suburban Ohio
First Author: **Ariana Brovarenko** - Columbus City Schools - ariana.brovarenko15@gmail.com

9:15 AM Teacher Perception of Student Exposure to Project-Based Learning in Elementary Education in Central, Ohio: A Qualitative Exploratory Case Study
First Author: **Michael Brovarenko** - Columbus City Schools - michael.brovarenko@gmail.com

1:45 PM Carbonate-Enhanced Photoelectrochemical Corrosion Limits the $CO_2$ Reduction Reactivity on $CuFeO_2$ Delafossite Photocathodes
First Author: **Piyush Anil Kumar Sharma** - The Ohio State University - sharma.1282@buckeyemail.osu.edu
Advisor: L. Robert Baker- baker.2364@osu.edu

2:00 PM Thermal Mismatch Behavior of EBC-Coated Ceramic Matrix Composites: A Parametric Study Using Digital Image Correlation and Finite Element Analysis
First Author: **Jaylund Rose** - Kent State University - jrose60@kent.edu
Additional Authors: Ali Abdul-Aziz, aabdula3@kent.edu, Mubaraq Onifade, monifade@kent.edu
Advisor: Ali Abdul-Aziz- aabdula3@kent.edu

2:15 PM Pavement Management - Stay Ahead of the Curve With AI
First Author: **Steve Koch** - GAI Consultants - s.koch@gaiconsultants.com

2:30 PM Computational Framework for Understanding ClpC Dynamics: A Defense Player in Bacterial Cells
First Author: **Fatima Anwar** - University of Cincinnati - anwarfm@mail.uc.edu
Additional Authors: Sumedhi Jayasekara, jayasegs@mail.uc.edu, Zhaochang Zhang, zhang3zc@mail.uc.edu
Advisor: George Stan- stangg@ucmail.uc.edu

# Poster Sessions

## 10:00 – 11:30 AM and 1:00 – 2:00 PM

## Located in the Ballroom

**Please note: Authors will be with their poster in the morning session. The afternoon session will be a poster viewing session.**

Poster: 01 Evaluating the Impact of Lake Erie Ice Cover on Summer Harmful Algal Blooms
First Author: **Jules Bigl** - The Ohio State University - biglj@wittenberg.edu
Additional Author: Sabrina Jaffe, jaffes@wittenberg.edu
Advisor: Sabrina Jaffe- jaffes@wittenberg.edu

Poster: 02 A Cascading Grassed Waterway Case Study: Hydrology & Nutrient Reductions
First Author: **Haley Hoehn** - Wright State University - haley.hoehn@wright.edu
Additional Authors: Stephen Jacquemin, stephen.jacquemin@wright.edu, Morgan Grunden, morgan.grunden@wright.edu, Kenneth Kline, kenneth@cluneyconsult.com, Angela Clayton, angie.clayton@wright.edu, Theresa Dirkson, theresa.dirkson@ag.mercercountyohio.gov

Poster: 03 A Study of Management Techniques for Invasive Lesser Celandine (*Ficaria verna*)
First Author: **Kayleigh Vance** - Cleveland State University - 2929285@vikes.csuohio.edu
Additional Author: Dr. Emily Rauschert, e.rauschert@csuohio.edu

Poster: 04 Effect of Antibiotics on the Aquatic Invertebrate *Daphnia magna*
First Author: **Kymberlie Kundtz** - Wilmington College - kymberlie.kundtz@wilmington.edu
Additional Authors: Kendra Cipollini, kendra_cipollini@wilmington.edu

Poster: 05 Macroinvertebrate Diversity In Restored Wetlands In The Grand Lake St. Marys Watershed
First Author: **Hunter Lenhart** - Wright State University - h-lenhart@onu.edu
Additional Authors: Haley N. Hoehn, haley.hoehn@wright.edu, Morgan C. Grunden, morgan.jutte@wright.edu, Astryd Littlejohn, littlejohn.27@wright.edu, Joshua Fensler, fensler.3@wright.edu, Jason C. Doll, jason.doll@fmarion.edu, Stephen J. Jacquemin, stephen.jacquemin@wright.edu

Poster: 06 Compositional, Mineralogical, and Petrological Analysis of Low-Albedo Volcanic Units in Tyrrhena Terra and Hesperia Planum Using MGS-TES Data: Comparative Analysis with Syrtis Major to Characterize Compositional Variation Between Noachian and Hesperian Period
First Author: **Abdul Rashid Yakubu** - Ohio University - ay014025@ohio.edu
Advisor: Keith Milam- milamk@ohio.edu

Poster: 07 Effect of Riparian Agricultural Buffer Strip Leaf Extracts on the Invertebrate *Daphnia magna*
First Author: **Gabrielle Perkins** - Wilmington College - gabrielle.perkins@wilmington.edu
Additional Author: Kendra Cipollini, kendra_cipollini@wilmington.edu

Poster: 08 Translating Epidemiological Evidence into Intervention Design: Multivariable Risk Modeling of E-Cigarette Uptake and Chronic Comorbidities to Inform Public Health Prevention
First Author: **Md Saif Mahabub** - University of Cincinnati - mahabumf@mail.uc.edu
Additional Author: Mst Maimuna Sultana Trisha, trishamaimuna56@gmail.com

Poster: 09 Generalizing LORETA-Derived Source Intensity Estimates From High-Density EEG Using Gradient Boosted Decision Trees
First Author: **Bayan Ahmad** - University of Akron - ba82@uakron.edu
Additional Author: Buket Barkana, bbarkana@uakron.edu
Advisor: Buket Barkana- bbarkana@uakron.edu

Poster: 10 Morphometric Variation Among Invasive Box Tree Moth (*Cydalima perspectalis*) Populations in North America and Europe
First Author: **Tanisha Choudhary** - Kent State University - tchoudha@kent.edu
Advisor: Sangeet Lamichhaney- slamichh@kent.edu

Poster: 11 Natural Maternal Immunity Protects Neonates from *Escherichia* coli sepsis
First Author: **Raymond Diep** - University of Cincinnati - diepre@mail.uc.edu
Advisor: Sing Sing Way- waysg@ucmail.uc.edu

Poster: 12 Development of Indirect ELISAs for Determination of OVA-specific IgA and IgG Responses in Mice
First Author: **Hayden Elliott** - Franciscan University of Steubenville - helliott001@student.franciscan.edu
Additional Authors: Sophia Gellner, sgellner001@student.franciscan.edu, Joseph Bonagura, jbonagura001@student.franciscan.edu, Joel Capelli
Advisor: Kyle McKenna- kmckenna@franciscan.edu

Poster: 13 Explainable AI and EEG for Cognitive Load Monitoring in Pediatric Language Therapy
First Author: **Rachael Brimm** - University of Akron - rab218@uakron.edu
Additional Authors: Bayan Ahmad, ba82@uakron.edu, Kristen Shepherd Crish, kas180@uakron.edu, Mary Sill, Buket D. Barkana, bbarkana@uakron.edu
Advisor: Buket Barkana- bbarkana@uakron.edu

Poster: 14 Structure-Activity Relationship in Di-Halogenated (8-Antimicrobial) 8- Hydroxyquinoline
First Author: **Uduakabasi Esset** - Kent State University - uesset@kent.edu
Additional Authors: Maha Ali, mali27@kent.edu, Rakan Almazrua, ralmazru@kent.edu, Songping Huang, shuang1@kent.edu
Advisor: Songping Huang- shuang1@kent.edu

Poster: 15 Antimicrobial Resistance of *Escherichia coli* in Ohio Surface Waters: Occurrence, Resistance Patterns, Environmental Drivers, and Public Health Implications
First Author: **Patrick Etus** - Independent Researcher - etus4p@gmail.com
Additional Author: Micheal Oladosu, mikeoladosu@gmail.com

Poster: 16 Sodium Lauryl Sulfate Induced Cytotoxicity and Nrf2 Expression in HaCaT Keratinocytes
First Author: **Andrew Franchini** - Marietta College - anf005@marietta.edu
Advisor: Suzanne George- ksg001@marietta.edu

Poster: 17 Characterizing A Novel Developmental Gene in *Streptomyces coelicolor*
First Author: **Evelyn Joseph** - Otterbein University - joseph11@otterbein.edu
Additional Author: Jennifer A. Bennett, jbennett@otterbein.edu
Advisor: Jennifer Bennett- jbennett@otterbein.edu

Poster: 18 Histological Assessment of Renal Tissue Following Antalarmin Treatment in a Cuprizone Mouse Model of Demyelination
First Author: **Grace Kamau** - Kent State University - gkamau@kent.edu
Additional Authors: Faeze Shiralipour, fshirali@kent.edu, Mercy Oso, moso@kent.edu, Robert Clements, rclement@kent.edu, Elda Hegmann, ehegmann@kent.edu
Advisor: Elda Hegmann- ehegmann@kent.edu

Poster: 19 Male Sex Is Associated with Increased Gingival Bleeding in Adolescents Despite Regular Dental Care
First Author: **Anuki Malimbada Liyanage** - The Ohio State University - malimbadaliyanage.2@osu.edu
Additional Authors: Sapuni Chandrasena, 2. Email: Sapuni.Chandrasena@osumc.edu, Chanaka Kottegoda, kottegoda@marshall.edu
Advisor: Chanaka Kottegoda- kottegoda@marshall.edu

Poster: 20 Butyrylcholinesterase as a Pseudocatalytic Bioscavenger: *In vitro* Evaluation of Methylpiperidine Quinone Methide Precursors as Therapeutics Against Organophosphorus Exposure
First Author: **Kathryn Mooren** - The Ohio State University - krmooren@gmail.com
Additional Authors: Abigayle Jorden, jorden.14@osu.edu, Ryan Maguire, maguire.112@osu.edu, Christopher Callam, callam.1@osu.edu, Craig McElroy, mcelroy.31@osu.edu, Christopher Hadad, hadad.1@osu.edu
Advisor: Christopher Hadad- hadad.1@osu.edu

Poster: 21 Exploration of Developmental Suppressor Mutations in *Streptomyces venezuelae*
First Author: **Noor Moussa** - Otterbein University - moussa1@otterbein.edu
Additional Author: Jennifer Bennett, jbennett@otterbein.edu

Poster: 22 Examining tRNA Quality in Yeast Cells Under Oxidative Stress Conditions
First Author: **Hailey Mulvihill** - Wittenberg University - mulvihillh@wittenberg.edu
Additional Author: Kunal Chatterjee, chatterjeek@wittenberg.edu
Advisor: Kunal Chatterjee- chatterjeek@wittenberg.edu

Poster: 23 Evaluation of Retinal Structural and Functional Changes in an STZ-Induced Mouse Model of Diabetes
First Author: **Zaid Mustafa** - The Ohio State University - mustafa.116@osu.edu
Additional Authors: Emily Rogers, Emily.Rogers@osumc.edu, Dr. Sumaya Hamadmad, sumaya.Hamadmad@osumc.edu, Dr. Colleen Cebulla, Colleen.Cebulla@osumc.edu, Dr. Tyler Heisler-Taylor, Tyler.Heisler-Taylor@osumc.edu
Advisor: Sumaya Hamadmad- Sumaya.Hamadmad@osumc.edu

Poster: 24 Development of an Enhanced Factor XIII Activity Assay
First Author: **Gabriel Palumbo** - The Ohio State University - palumbo.109@osu.edu
Additional Authors: Amanda Waller, Amanda.Waller@nationwidechildrens.org, Iva Pruner, Iva.Pruner@nationwidechildrens.org, Katelyn Wolfgang, katelyn.wolfgang@nationwidechildrens.org, Michael Durda, michael.durda@nationwidechildrens.org
Advisor: Bryce Kerlin- Bryce.Kerlin@nationwidechildrens.org

Poster: 25 SCN Neuromedin-S Neuron Activation Across the Proestrous Day
First Author: **Sophia Pinti** - Kent State University - spinti@kent.edu
Additional Author: Richard Piet, rpiet@kent.edu
Advisor: Richard Piet- rpiet@kent.edu

Poster: 26 3D-printed Multi-material Shape Memory Polymeric Constructs for Minimally Invasive Tissue Engineering Applications
First Author: **Pratima Poudel** - University of Akron - pp152@uakron.edu
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