Indiana Academy of Science

141st Annual Meeting

March 21, 2026

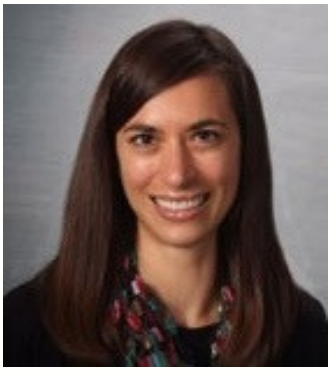
JW Marriott Downtown Indianapolis

2025-2026 Academy Council

The Academy Council consists of the current elected Academy officers, Chairs of the Foundation and Senior Research Grants Committee, two at-large members, and the Director. The Council is responsible for all business of the Academy. Any individuals interested in serving in a position on the Academy Council should contact the Academy for more information.










Top Row (L-R): Luis Palacio, Academy President; Jennifer Kowalski, President-Elect, Samina Akbar, Past President

Second Row (L-R): Christopher Schmidt, Member-at-Large; Michelle Marincel-Payne, Secretary; Luke Jacobus, Parliamentarian; Moses Prabu, Treasurer; Michelle Marincel-Payne, Secretary

Third Row (L-R): Phillip Villani, Senior Research Grants Chair; Tom Dolan, Foundation Commitee Chair; Erin Gerecke, Member-at-Large;

A list of Academy Elected and Appointed Committees can be found on the Indiana Academy of Science Website.

2025-2026 Staff

- Liz Subrin
- Executive Director
- Second Year of IAS Membership

- Dr.Wes Tobin
- Webmaster
- 2024-2027 Term
- 17 Years of IAS Membership

- Colin Topping
- Social Media Coordinator
- 2025-2026 Term
- Second Year of IAS Membership

- Paul Doss
- INSPECT Fellowship Coordinator
- 2025-2026 Term
- 41 Years of IAS Membership

- Dr. Horia I. Petrache
- Proceedings Editor
- 2025-2026 Term
- 19 Years of IAS Membership

2025-2026 Section Leadership

Section Chairs preside at meetings, contribute to the planning and execution of the annual academy meeting, and contact section members when necessary. Section vice chairs are elected in the section business meeting at each annual meeting to serve one year as vice chair (chair-elect) and then one year as chair.

Section	Section Chair and Vice Chair
Agriculture	Chris Sedlacek
Anthropology	Amandine Eriksen and Lilly Bucher
Biochemistry & Physiology	Michelle Malott and Hisako Masudah
Botany	Darrin Rubino and Phillip Villani
Cell Biology	Takuya Akiyama and Kris Schwab
Chemistry	Kamila Deavers and Meden Isaac-Lam
Computer Science	Debanjali Banerjee and William D. Moscoso Barrera
Conservation, Sustainability and Land Management	Jordan Marshall and Andrea Echeverry-Alcendra
Earth Science	Ben Dattilo
Ecology	Matt Harmon
Engineering	Abi Nazari and Yunting Yin
Environmental Science	Jia Xue
Health Science	Armando Peña and Neetu Mahendraker
History of Science	Rex Bickers and Jesse Hannan
Mathematics	Kevin Drury
Microbiology and Molecular Biology	Elizabeth Delery and Kyu Hong Cho
Physics and Astronomy	Horia Petrache and Maarij Syed
Plant Systematics and Biodiversity	Joanna Stebing and Elizabeth Mabee
Science Education	Rona Robinson-Hall and Catherine Steding
Zoology and Entomology	Glené Mynhardt and Christopher Wirth

Complete descriptions of the content areas for each section can be found on the Indiana Academy of Science website.

Section Business Meeting
4:30-5:00pm

Section	Meeting Room
Agriculture	TBD
Anthropology	109
Biochemistry & Physiology	103
Botany	White River F-J
Cell Biology	White River A-E
Chemistry	104
Computer Science	108
Conservation, Sustainability and Land Management	207
Earth Science	203
Ecology	202
Engineering	209 (shared)
Environmental Science	208
Health Science	206
History of Science	TBD
Mathematics	209 (shared)
Microbiology and Molecular Biology	105
Physics and Astronomy	209 (shared)
Plant Systematics and Biodiversity	204
Science Education	201
Zoology and Entomology	205

President's Welcome

Welcome to the 141st Annual Indiana Academy of Science Meeting!

141st Annual Academy Meeting Agenda

7:30-8:00 AM	**Poster Set Up & Oral Presentation Download**	White River F-J
7:30 - 9:00 AM	**Registration**	In Front of Room 108
8:30 -9:00 AM	**Morning Plenary Session: President's Welcome & Address – Dr. Luis Palacio**	White River A-E
9:00 - 10:30 AM	**Oral Presentations, Hot Topics & Workshops**	103- 105, 109 201 - 209
10:00 AM - 12:15PM	**Poster Session and Emerging Scientist Research Poster Competition**	White River F-J
12:15 - 1:30 PM	**Academy Luncheon**	White River A-E
12:30 - 1:15 PM	**Keynote Address**	White River A-E
1:00 - 4:00 PM	**Professional Headshots**	108
2:30-3:30 PM	**Emerging Scientist Research Oral Competitions**	White River A-E , White River F-J
1:30 - 4:30 PM	**Oral Presentations, Hot Topics & Workshops**	103- 105, 109 201 - 209
4:30 - 5:00 PM	**Section Meeting**	103- 105, 109 201 - 209
5:00 - 6:00 PM	**Awards & Networking Reception: Awards - Emerging Scientist, DEI Advocate, Distinguished Scholar, Fellowship & Distinguished Service**	White River A-E

Keynote Address

Dr. Franklin Carrero-Martinez

About Dr. Franklin Carrero-Martinez

Franklin Carrero-Martinez joined the National Academies of Sciences, Engineering, and Medicine in 2018, where he directs the Science and Technology for Sustainability program within the Office of International Networks, Collaboration, and Security. He has led cross-sector initiatives spanning sustainability, international partnerships, and support for displaced scientists and engineers. He is a scientist–diplomat whose work connects research, innovation, and international cooperation to advance sustainability and strengthen science systems globally. Prior to joining the National Academies, Dr. Carrero-Martínez served as Acting Deputy Science and Technology Adviser to the Secretary of State. He began his career in science diplomacy and policy as the American Association for the Advancement of Science (AAAS) Roger Revelle Fellow in Global Stewardship, with a joint appointment in the U.S. Department of State's Office of the Science and Technology Adviser to the Secretary (STAS) and the National Academy of Sciences. Earlier in his career, Dr. Carrero-Martínez was an associate professor at the University of Puerto Rico (UPR), Mayagüez, and held an adjunct appointment at the UPR Medical Sciences Campus. He has also been affiliated with Duke University, the Massachusetts Institute of Technology, and Japan's Institute of Genetics. Dr. Carrero-Martínez holds a B.S. in biology (honors) from the University of Puerto Rico and a Ph.D. in cell and developmental neurobiology from the University of Illinois at Urbana-Champaign, along with a certificate in business administration.

Keynote Address

Dr. Franklin Carrero-Martinez

From First-Gen to Science Diplomacy: Science as a Passport

Description Coming

Awards

2026 Academy Fellows

A Fellow is a member of the Academy for a minimum of 5 years who has demonstrated service to the Academy and to the advancement of science in Indiana; service to education in science; and achievements in scientific research. Nature of service to the Academy includes attending Indiana Academy of Science meetings, presenting papers at meetings, publishing in the *Proceedings*; serving as an officer, section or committee chair, or committee member; and playing a role in organizing Academy activities. Fellow nominees are selected by current Academy Fellows and recommended to the Academy Council by the Awards Committee.

Dr. Erin McClelland

Dr. Erin McClelland received a Ph.D. in Biology under Dr. Wayne Potts from the University of Utah. She completed postdoctoral training under Dr. Arturo Casadevall at Albert Einstein College of Medicine. She joined the faculty at Marian University Wood College of Osteopathic Medicine in 2021 to teach Immunology to first- and second-year medical students.

Dr. McClelland's research interests encompass understanding host-pathogen interactions of the pathogenic yeast, Cryptococcus neoformans, including at the level of macrophage polarization and the sex of the host, to try to understand why 70 percent of patients with cryptococcosis are male.

Dr. McClelland has served as a previous Vice Chair and Chair of the IAS Microbiology and Molecular Biology section and is the current chair of the Science and Society Committee where she has run the Science with a Twist event for the last 3 years. Dr. McClelland is also currently serving on the Emerging Scientist Research Competition committee.

Awards

2026 Academy Fellows

(continued)

Nate Engbrecht

Nate Engbrecht serves as the State Herpetologist for the Indiana Department of Natural Resources, Division of Fish, Wildlife & Nature Preserves. He received his Bachelor's Degree from Bethel University and his Master's of Science from Indiana State University where he conducted his thesis work on state endangered Crawfish Frogs (Lithobates areolatus). In his role as the Agency's Herpetologist, Nate assumes statewide responsibility of overseeing the research and management of Indiana's amphibians and reptiles. Current projects include a study of how state endangered Kirtland's Snakes (Clonophis kirtlandii) are using restored post-agricultural landscapes, range expansions of the Green Treefrog (Hyla cinerea) along Indiana's southern margin, and the conservation and recovery of Crawfish Frogs.

Nate has been a member of the Academy since 2008 and currently serves on the Biodiversity and Natural Areas Committee. He has led the herpetology team during the organization's annual bioblitz, presented his research during annual IAS meetings, and has published several papers in the Proceedings. In his spare time, Nate enjoys beekeeping, nature photography, blacksmithing, growing carnivorous plants, and gardening with his wife Jamie at their home in Monroe County.

Awards

2026 Academy Fellows

(continued)

Dr. Bikram Sharma

Dr. Bikram Sharma is an Associate Professor of Biology at Ball State University, where he leads a laboratory focused on cardiovascular development and function. He earned a B.A. in Biology from Hanover College (2007), an M.S. in Biology and Biotechnology from Ball State University (2009), and Ph.D. in Physiology from Indiana State University (2012) followed by postdoctoral training at Stanford University (2013–2018) specializing in developmental cardiovascular biology and angiogenesis. Since establishing his independent laboratory at Ball State University, Dr. Sharma has secured external funding, including an NIH R15 award (2021–2024), to support research on coronary vessel development. He has published approximately 20 peer-reviewed journal articles in the field of cardiovascular development and function, contributing significantly to understanding endothelial signaling, angiogenesis, and heart morphogenesis. His laboratory integrates genetic models, cellular and molecular analysis, and in vitro and in vivo approaches to study mechanisms underlying coronary vascular growth and regeneration.

Dr. Sharma has been an active member of the Indiana Academy of Science since 2008, serving as Co-Chair and Chair of the Cell Biology Section and on multiple committees, including the Senior Research Grant and Emerging Scientist Competition Committees. In addition, he has mentored and sponsored numerous student poster and oral presentations at IAS annual meetings (12 total since 2018) and delivered a Hot Topics lecture on coronary vessel development (2025). In addition, Dr. Sharma is also a three times recipient of Indiana Academy of Science Senior Research Grant funding. His long-standing involvement with the Academy, combined with a strong research record and commitment to student training, positions him well for this recognition.

Awards

2026 Academy Fellows

(continued)

Dr. F. Collin Hobbs

Dr. F. Collin Hobbs has been a member of the Academy since 2008. His contributions to the Academy include authoring or coauthoring 17 IAS Annual Meeting oral and poster presentations, advising two undergraduate research teams who earned IAS Emerging Scientist Research Awards in 2023 and 2024, twice serving as the Vice-Chair and Chair of the Plant Systematics and Biodiversity Section (2016-2018, 2021-2023), participating in 10 IAS Bioblitz events (2011-2025), including serving as the 2019 vascular plant Team Lead, serving on the Senior Research Grants Committee (2019-2022), and serving as a reviewer and editorial board member for the PIAS.

During his early years as graduate student at Indiana University he received an IAS Senior Research Grant (2009) which helped kickstart his PhD research and for which remains grateful to this day.

Since joining the faculty at Huntington University in 2013 he has mentored over 38 undergraduate students who conducted research in the fields of ecology and botany. His roles at Huntington University include serving as the Manager of Thornhill Nature Preserve, Curator of the Fred Loew Herbarium, and the Coordinator of the university campus vegetable gardens, beehives, and orchard. He has served twice as the President of the Indiana College Biology Teachers Association and in 2025 received his institution's annual Faculty Excellence in Teaching Award and an honorary life membership by the Alpha Chi National College Honor Society for distinguished service and undergraduate mentorship.

Awards

2026 Academy Fellows

(continued)

Dr. Wes Tobin

Wes Tobin is Associate Professor of Physics and Department Chair of Natural Sciences at Indiana University East. He has been a member of the Indiana Academy of Science since 2009 and has regularly participated in its annual meetings through research presentations and professional engagement. Since 2018, he has assumed sustained leadership within the Academy, serving multiple terms as Vice-Chair and Chair of the Physics and Astronomy Section, Chair of the Mathematics Section, as a member of the Proceedings of the Indiana Academy of Science Editorial Board, and currently as Academy Webmaster. He also served as a Scientist Mentor in the Academy's STEM Scientist Mentorship initiative developed in partnership with the Indiana Department of Education, supporting professional development for high school STEM educators. Through long-standing participation and extended section leadership, he has contributed to strengthening disciplinary exchange and advancing the Academy's mission across Indiana.

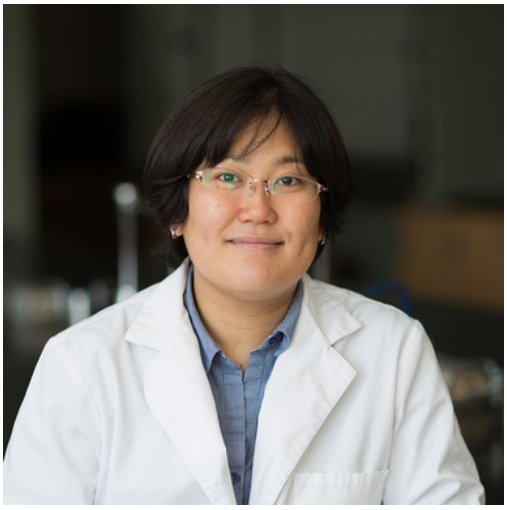
Dr. Tobin's primary research focuses on observational astrophysics, particularly close eclipsing binary systems and stellar astrophysics. He has authored 12 refereed publications with more than 200 citations collectively, including articles in Monthly Notices of the Royal Astronomical Society and New Astronomy, and has presented his work at national meetings of the American Astronomical Society. In addition, he conducts scholarship in science pedagogy, including research on technology-enhanced instruction and online learning in the physical sciences.

In his academic role, Dr. Tobin teaches courses in physics, astronomy, chemistry, and mathematics, reflecting a broad commitment to foundational STEM education. He has contributed to national astronomy education initiatives through collaboration with Pearson's Cosmic Perspective team and as a contributing author to OpenStax Astronomy. He is also an active Quality Matters reviewer, underscoring his commitment to high standards in course design and instructional quality. Together, his teaching, scholarly, and service work reflect sustained dedication to strengthening science education and the scientific community in Indiana.

Awards

2026 Distinguished Scholar

The Distinguished Scholar Award of the Indiana Academy of Science is bestowed upon individuals who have been recognized by the Academy as having an exceptional record of scholarship. Award recipients are selected from nominations submitted to the Awards Committee and recommended to the Academy Council for final approval.



Dr. Hisako Masuda

Dr. Hisako Masuda is a Professor of Biochemistry in the School of Sciences at Indiana University Kokomo. She received her Ph.D. in Microbiology and Molecular Genetics from Rutgers University. She studies bacterial metabolism, genomics, and their phenotypic plasticity. Her current research primarily focuses on biodegradation and chemical repurposing of nylon. Using soil bacterial, her lab studies bacterial biodegradation of nylon and other environmental pollutants. She applies principles of Green Chemistry while developing a method of converting nylon waste into other non-toxic polymers. In collaborative work with health scientists, her lab investigates gut microbiomes of Indiana native birds as well as human subjects in a clinical study. Dr. Masuda has involved over fifty undergraduate students in her research at IU Kokomo and published 23 articles with many student co-authors. She was the recipient of the Distinguished Research Award and the Trustee's Teaching Award at IU Kokomo. She has been a member of the Indiana Academy of Science since 2013. She has served on multiple committees and as a section chair. Currently she is a co-chair of the Emerging Scientist Poster Competition committee and vice chair of the Biochemistry section. She was elected as a fellow of IAS in 2025.

Awards

2026 Distinguished Service

The Distinguished Service Award of the Indiana Academy of Science is bestowed upon individuals who have been recognized as having supported the Academy through service exceeding any normal expectation. Award recipients are selected from nominations submitted to the Awards Committee and recommended to the Academy Council for final approval.

Dr. Marc Milne

Dr. Marc Milne is a Professor of Biology at the University of Indianapolis, a taxonomist and ecologist, and one of the few experts on North American sheet-web spiders. Dr. Milne regularly teaches General Biology, Evolutionary Biology, Conservation, and Entomology and acts as a research advisor for several students within the Biology Department. He has helped students publish as co-authors on manuscripts detailing taxonomic revisions of spider genera, ecological effects of fire on spider communities, and updates to spider distribution records in the state. He has been an author on more than 45 scientific publications in journals such as Ecosphere, ZooKeys, and Zootaxa and has presented research at international and national scientific conferences, including the International Congress of Arachnology and the Ecological Society of America. Dr. Milne and a cohort of his research students have attended every IAS meeting since arriving in the state in late 2014. Dr. Milne's service to the Indiana Academy of Science began in that same year, when he became a member of the Academy and joined the Biodiversity and Natural Areas Committee. In 2017 was elected as the Vice Chair for the Zoology and Entomology section and then Chair of that section the following year. Dr. Milne joined the Senior Research Grant Committee in 2019 and was elevated to the Chair of the Biodiversity and Natural Areas Committee in the same year but had to step down from both soon after because he was elected as the President-elect of the Indiana Academy of Science in 2021. Dr. Milne began his Presidency of IAS in 2022, during which he worked with Sarah Mordan-McCombs to overhaul of the IAS website, with Delores Brown to manage the 2023 IAS conference and to implement Conservation Management as a new meeting section, with Sergio Henriques to represent the Society at the Indiana Conservation Partners meeting, and with Andrew Huntington to form a strong partnership between IAS and the Indiana Land Protection Alliance to found the Indiana Biodiversity Grant. Since its founding, this grant has grown to gain a partnership in the Indiana Native Plant Society and currently gives thousands of dollars to local taxonomists to document biodiversity on natural sites around the state. Dr. Milne served as the Immediate Past-President of IAS until 2024 and since then has continued to attend meetings with his students to highlight spider discoveries they have made from around the nation.

Awards

2026 Dr. Delores G. Brown Advocate Award

The Dr. Delores G. Brown Advocate Award is bestowed upon individuals who have promoted diversity, equity, inclusion, belonging, and/or justice within the Academy and/or their scientific communities through actions sustained over time of that have made a recent critical impact. Nominations are submitted to the DEI Committee and recommended to the Academy Council.

Dr. Maram Said

Dr. Maram Said is an obstetrician and gynecologist (OB-GYN) with Ascension St. Vincent in Carmel, Indiana. She received her medical degree from Des Moines University College of Osteopathic Medicine and Health Sciences and subsequently trained at St. Vincent Indianapolis Hospital. She specializes in minimally invasive and complex gynecologic surgery, routine and high risk obstetrical care, and all aspects of female reproductive health including menopause and fertility. Dr. Said is a member of the Society of Laparoendoscopic Surgeons, has served as Chair of her hospital's OB GYN Department, and has presented at the ACOG Annual Clinical Meeting and at the American Association of Gynecologic Laparoscopists (AAGL). She currently serves as a clinical assistant Professor for Marian University in addition to the Ascension St. Vincent OB-GYN Residency program. Importantly, Dr. Said has lectured by webinar to the Palestinian Society of Obstetricians and Gynecologists, as well as to residency programs throughout the United States. Dr Said aligns with the mission of PAMA to mentor and train both American and Palestinian physicians and medical students, and she is very passionate about improving outcomes, access, innovation, and medical education in women's health.

Schedule of Oral Presentations

Professional Development & Program Highlights

Time	Presentation Title & Presenters	Section of Interest	Room
9:15 AM	**More Than Meets the Assay: Reinterpreting Proteasome Activity in C. elegans** Erika B. Sorensen	Grant Reporting, Cell Biology	103
9:30 AM	**Successful Culture Development for Teams** Dr. Mmbaga	DEI, Leadership	103
9:45 AM	**IAS Proceedings: Information for Current and Prospective Authors** Horia Petrache	Publishing	103
10:45 AM	**Machine Learning-Based Detection of Mouse Hippocampal Sharp-Wave Ripples (SWRs) Using a Channel-Specific Training Approach to Advance Understanding of Memory Disorders** Lauren Kleinert	Grant Reporting. Biochemistry & Physiology	103
11:45 AM	**Reactive Oxygen and Nitrogen Species (RONS) as a Potential Modulator of Metal Dependent Protein Function in Neutrophils** Michael W. Thompson	Grant Reporting. Biochemistry & Physiology	103
12:15 - 1:30 PM	**Academy Lunch**		**White River A-E**
1:30 PM	**Inspect Fellowship** Paul Doss, Jesse Hannan, Alexandra Hicks, Lean Hong Tan,	INSPECT Fellowship	103
1:45 PM	**Successful Culture Development for Teams** Dr. Mmbaga	DEI, Leadership	103
3:30 PM	**Leadership in the Indiana Academy of Science** Kristen Schunk Moreland and Jo Nahod-Carlin	IAS Leadership	103
4:30 PM	**Section Meeting**		**103**

Schedule of Oral Presentations

Hot Topics

Sponsored By: Taft Law

Time	Presentation Title & Presenters	Section of Interest	Room
9:15 AM	**Harnessing Artificial Intelligence to Address Engagement, Technical Writing, and Content Mastery in Collegiate Science Instruction** Ashlee Tietje	Science Education, Computer Science	209
9:45 AM	**Alternative Grading STEM Courses** Dr. Sarah Justice, Dr. Sarah Klanderman	Science Education, Mathematics	209
12:15 - 1:30 PM	**Academy Lunch**		**White River A-E**
2:15 PM	**From Inquiry to Innovation: Preparing Elementary Science Teachers with AI and 3D Printing** Dr. Brittany Garvin	Science Education	209
2:45 PM	**AI for Health: Discovering Digital Biomarkers Across Speech, Text, and Echocardiography** Dr. Yunting Yin	Engineering, Health Sciences	209
3:15 PM	**The New Order: How AI Rewrites the Narrative of Science** Dr. Chris Edwards	History of Science, Physics & Astronomy	209
3:45 PM	**The Bee Campus Effect: Integrating Applied Research, Service Learning, and Teaching at the University of Southern Indiana** Dr. Edith Hardcastle	Conservation, Sustainability and Land Management, Plant Systematics & Biodiversity	209
4:30 PM	**Section Meeting**		**209**

Schedule of Oral Presentations

Workshops

Sponsored By: Taft Law

Time	Presentation Title & Presenters	Section of Interest	Room
9:15 AM	**The State of Indiana and Highlights from the History of Genetics A sampling of legendary Hoosiers and their noteworthy contributions to this modern science.** Jesse Hannan, Seth Hamby, Yagmur Metin, Dr. Rex Bickers	History of Science, Health Sciences	208
12:15 - 1:30 PM	**Academy Lunch**		**White River A-E**
1:45 PM	**Integrating Entrepreneurial Mindset into Undergraduate STEM Research** Dr. Michelle Marincel Payne, Dr. Irene Reizman	Science Education, Engineering	208
2:45 PM	**Non-AI and AI-Powered Tools for Species Conservation Planning and Monitoring: Different tools, Same Purpose!** Andrea Echeverry-Alcendra, William Moscoso Barrera	Conservation, Sustainability and Land Management, Computer Science	208
4:30 PM	**Section Meeting**		**208**

Schedule of Oral Presentations

Agriculture

Time	Presentation Title & Presenter	Room
12:15 - 1:30 PM	**Academy Lunch**	**White River A-E**
3:30 PM	**Microbial nitrifier denitrification: Linking genetic makeup to physiological traits and real time nitrous oxide emission potentials** Chris Sedlacek	105
4:30 PM	**Section Meeting**	

Schedule of Oral Presentations

Anthropology

Time	Presentation Title & Presenter	Room
9:30 AM	**Anthropology and Anthropophagy: Reevaluating Herxheim, Germany** Belle Custodio	109
9:45 AM	**Childhood in Early Indianapolis: Growth and Health Disparities among the Juveniles from the Greenlawn Cemetery** Jessica Giles	109
12:15 - 1:30 PM	**Academy Lunch**	**White River A-E**
1:45 PM	**Applied Osteology in Active Medicolegal Investigations: Field Recovery Challenges and Adaptations** Ella Uren	109
2:00 PM	**Unmingling an Unprovenienced and Under-Documented Skeletal Collection with Commingled Forensic, Anatomical and Historical Remains** Krista Latham	109
2:15 PM	**Mounted Search and Recovery: The Benefits of Utilizing a Scent Horse in Interdisciplinary Search and Recovery Operations** Lillian Bucher	109
2:30 PM	**Review of the Flora Mastodon Site Cultural Materials** Daniel Lebakos	109
2:45 PM	**Topotooth: A novel online software program to measure dental occlusal characteristics.** Christopher Schmidt	109
4:30 PM	**Section Meeting**	**109**

Schedule of Oral Presentations

Biochemistry & Physiology

Time	Presentation Title & Presenter	Room
9:15 AM	**Investigation of the potential ligand-binding partners of the G protein-coupled receptor FSHR-1 under oxidative stress in C. elegans** Milica Nenadovich	104
9:30 AM	**Lipidomic Analysis of SCS-Deficent Muscles in Mouse Models of Mitochondrial Myopathy** Jada Radford	104
9:45 AM	**Robustness of Carbonic Anhydrase for Application in Nanoscale CO2 Capture Technologies** Arjun Sharma	104
12:15 - 1:30 PM	**Academy Lunch**	**White River A-E**
4:30 PM	**Section Meeting**	

Schedule of Oral Presentations

Botany

Time	Presentation Title & Presenter	Room
9:30 AM	**Noteworthy Natives - An Intersection of Botany, Art, and Music** Marcia E. Moore	202
9:45 AM	**Using tree-ring analysis to explore the history of three nineteenth-century buildings in Hanover, Indiana (Jefferson County)** Darrin Rubino	202
12:15 - 1:30 PM	**Academy Lunch**	**White River A-E**
1:45 PM	**Mnium cuspidatum meristem growth and caulid branching control** Sophia Dobosiewicz	202
2:00 PM	**Minium cuspidatum: New Model Organism for Plant Pathogen Interactions** Clayton Reames	202
4:30 PM	**Section Meeting**	

Schedule of Oral Presentations

Cell Biology

Time	Presentation Title & Presenter	Room
12:15 - 1:30 PM	**Academy Lunch**	**White River A-E**
1:45 PM	**PHYSIOLOGICAL RESPONSES OF SEA CUCUMBERS TO THERMAL STRESS: CHANGES IN COELOMOCYTE NUMBERS** Fateha Arefin	105
2:00 PM	**The characterization of a Drosophila continuous mesodermal/muscle cell line to study trithorax and Polycomb regulation of Hox expression in embryonic heart development** Grace Martin	105
2:15 PM	**Defining the Treatment Period for Drug Screening in Zebrafish Models of Retinitis Pigmentosa** Mia K. Tsou	105
2:30 PM	**The Role of 5-HT1A Autoreceptors in Drosophila Activity Levels and Circadian Rhythm and its Relationship to Sex** Emma A Walker	105
2:45 PM	**PHYSIOLOGICAL RESPONSES OF SEA URCHINS EXPOSED TO GRADUALLY INCREASED TEMPERATURE AS A STRESSOR: CHANGES IN COELOMOCYTE NUMBERS** Sayed Mamun	105
3:00 PM	**trithorax (trx) regulation of Drosophila cardiac Hox gene activity and anterior-posterior patterning** Sumaiya Islam	105
3:15 PM	**Evaluating the Role of BIRC6 in Driving Chemotherapy Resistance in T-cell Acute Lymphoblastic Leukemia** Samson B. Miller	105
4:30 PM	**Section Meeting**	**White River A-E**

Schedule of Oral Presentations

Chemistry

Time	Presentation Title & Presenter	Room
12:15 - 1:30 PM	**Academy Lunch**	**White River A-E**
1:45 PM	**Investigation of Generalizable Engineering Strategies Through Rieske Dioxygenase Engineering** Froese, J. T.	104
2:00 PM	**Magnetic Resonance Imaging and Spectroscopy (MRI/MRS) in Post-Traumatic Stress Disorder (PTSD)** Meden F. Isaac-Lam	104
2:15 PM	**Interfacial Structure Matters: Adsorption of Organic Pollutants on Microplastics** Amrit Ojha	104
2:30 PM	**Structural and Catalytic Investigations into a Novel Tetrazolone-based Coordination Polymer** Kyle Petersen	104
2:45 PM	**Solid State Approaches for Synthesizing Biocompatible Composites for Osseointegration** Dr. Alexandra Tamerius	104
3:00 PM	**Exploring Synthetic Approaches of Metallation of Protoporphryn IX** Dylan S. Troglen	104
3:15 PM	**Development of fluorescent and colorimetric ionic nanosensors for forensic detection of controlled substances** Joel Moss	104
3:30 PM	**Paper-Based Microfluidic Devices for Multiplexed Colorimetric Detection of Disease Biomarkers** Doondeeshwar Patnala,	104
3:45 PM	**Liposome nanoparticles for the delivery of combinatorial therapeutic agents with doxorubicin and a near-infrared ionic dye against cancer** Mackenzie Gordon	104
4:00 PM		104
4:30 PM	**Section Meeting**	104

Schedule of Oral Presentations

Conservation, Sustainability, and Land Management

Sponsored By: Indianapolis Zoo

Time	Presentation Title & Presenter	Room
9:15 AM	**Road to Recovery: Using Headstarting and Egg Mass Translocations to Recover State Endangered Crawfish Frogs (Lithobates areolatus)** Nate Engbrecht	207
9:30 AM	**Shell yeah - getting active for freshwater mussels via AZA SAFE North American Freshwater Mussel** Monika Böhm	207
9:45 AM	**Project RESTORE: Research, education, and outreach to help private landowners steward their woodlands in the face of invasive species and deer.** Heather Reynolds	207
10:00 AM	**Investigating How Migration and Weather Affect Bird-Building Collisions and Bird Populations on The University of Indianapolis' Campus** Cassara Randall	207
12:15 - 1:30 PM	**Academy Lunch**	**White River A-E**
4:30 PM	**Section Meeting**	**207**

Schedule of Oral Presentations

Earth Science

Time	Presentation Title & Presenter	Room
9:15 AM	**Indiana's Earthquakes: Updating the Record to Improve Hazard Assessment** Victoria Leffel	203
9:30 AM	**Updated Subsurface Temperature Gradients to Inform Emerging Energy Opportunities in Indiana** Rachel Culver	203
9:45 AM	**Upscaling Upper Ordovician Mapping Units in SE Indiana** Ben Dattilo	203
12:15 - 1:30 PM	**Academy Lunch**	**White River A-E**
1:45 PM	**Hinge and Muscle Morphology of Strophomena and Strophodonta from the Ordovician of Southeastern Indiana** Jacqueline Miller	203
2:00 PM	**Geological Legacy of New Harmony, Posey County, Indiana: Emphasis on Historic Studies of Caverns, Karst, and Sinkholes** William Elliot	203
2:15 PM	**Early Hoosier Footprints: The Warren County Trackway Site** Peggy Fisherkeller	203
2:30 PM	**Dinosaurs vs. Crustaceans: Preservation of Fossil Footprints from Joanna's Tracksite (Lower Cretaceous Glen Rose Formation, Texas)** James O. Farlow	203
2:45 PM	**Last glacial maximum and late-glacial eolian sand activity, south-central Indiana** Henry Loope	203
3:00 PM	**Assessing antler weathering rates across a latitudinal gradient** Rachel Laker	203
3:15 PM	**Variation in proboscidean isotope ecology across deglaciation** Catalina Tomé	203
4:30 PM	**Section Meeting**	**203**

Schedule of Oral Presentations

Ecology

Sponsored By: SALIX Ecological Consulting & Restoration, LLC

Time	Presentation Title & Presenter	Room
12:15 - 1:30 PM	**Academy Lunch**	**White River A-E**
2:15 PM	**Variation in proboscidean isotope ecology across deglaciation** Catalina P. Tomé	202
2:30 PM	**Population Monitoring Methods of Blanding's Turtles (Emydoidea blandingii) Through Live Capture and Permanent Marking Techniques** Matt Harmon	202
2:45 PM	**Effect of Prescribed Burn Treatment of Creeping Juniper on Spiders in Little Missouri National Grasslands** Elijiah Birtchman	202
4:30 PM	**Section Meeting**	**202**

Schedule of Oral Presentations

Environmental Science

Time	Presentation Title & Presenter	Room
9:30 AM	**Determining X-Ray Fluorescence accuracy against Microwave Plasma Atomic Emission Spectroscopy for Lead Quantification** Ava Cothern	206
9:45 AM	**Comparison of Macroinvertebrate Populations and Their Connection to Water Quality in Two Indiana Watersheds: Big Walnut Creek (Putnam County) & Elkhart River (Elkhart County)** Kelsey Moore	206
10:00 AM	**Microbial Source Tracking of Water Pollutants Reveals Why Animals Aren't to Blame** Hunter J. Jaykoski	206
10:15 AM	**The who is who of Hoosier anglers – Segmenting the unique** Josef Hrabowski	206
12:15 - 1:30 PM	**Academy Lunch**	**White River A-E**
3:00 PM	**Utilization of Rhizofiltration for Removal of Ibuprofen from Natural Waters** Ryley Kidd	206
3:15 PM	**Combined Effects of Heat Stress and Microplastics Exposure to Algal-Cnidarian Symbiosis in Aiptasia** Gillian Thompson	206
3:30 PM	**The Impacts of Different Colored Microplastics on Aiptasia** Elizabeth Weitzel	206
4:30 PM	**Section Meeting**	

Schedule of Oral Presentations

Health Sciences

Sponsored By: Indiana University Indianapolis School of Health & Human Sciences

INDIANAPOLIS SCHOOL OF HEALTH & HUMAN SCIENCES

Time	Presentation Title & Presenter	Room
12:15 - 1:30 PM	**Academy Lunch**	**White River A-E**
2:00 PM	**Refractory Cytomegalovirus Reactivation Following Haploidentical Peripheral Blood Stem Cell Transplantation for Diffuse Large B-Cell Lymphoma With Treatment Failure of Maribavir: A Case Report** Risha Mehta	206
2:15 PM	**Reducing Loneliness in Older Adults Through Virtual Reality Travel: Examining Emotional and Meaning-Based Mechanisms** Ruiping Ren	206
2:30 PM	**Fostering Peer Belonging Through Medical Student Wellness Conference** Melissa Ullmer	206
4:30 PM	**Section Meeting**	206

Schedule of Oral Presentations

History of Science

Time	Presentation Title & Presenter	Room
12:15 - 1:30 PM	**Academy Lunch**	**White River A-E**
2:00 PM	**A History of Mathematics at Indiana University, 1890-1990** Samantha Duckworth	201
2:15 PM	**Evolutionary Cooperation and Transitions in Science** Zachary Hamby	201
2:30 PM	**Conservation and Change: A History of Science in North American Wildlife Management** Jesse Hannan	201
4:30 PM	**Section Meeting**	

Schedule of Oral Presentations

Mathematics

Time	Presentation Title & Presenter	Room
12:15 - 1:30 PM	**Academy Lunch**	**White River A-E**
1:45 PM	**Hidden Geometry Beneath Simple Outcomes in Nonlinear Dynamical Systems** Dr. Kevin L. S. Drury	201
4:30 PM	**Section Meeting**	

Schedule of Oral Presentations

Microbiology and Molecular Biology

Sponsored By: Indiana Biosciences Research Institute

INDIANA BIOSCIENCES RESEARCH INSTITUTE

Time	Presentation Title & Presenter	Room
12:15 - 1:30 PM	**Academy Lunch**	**White River A-E**
3:45 PM	**Comparative analysis of gut microbiome in wildtype and cancer inducible alleles (RasG12V and RasQ61H) of Drosophila melanogaster** Shishir Sarker	105
4:00 PM	**Widespread Multi-Drug-Resistant Bacteria and Resistance Genes in Indiana's Reservoirs** Eshaan Patel	105
4:15 PM	**Extracellular Vesicles Secreted by Babesia-Infected Erythrocytes Modulate Host Neutrophil Response** Jose Thekkiniath	105
4:30 PM	**Section Meeting**	**105**

Schedule of Oral Presentations

Physics and Astronomy

Time	Presentation Title & Presenter	Room
12:15 - 1:30 PM	**Academy Lunch**	**White River A-E**
3:00 PM	**Dopamine and its Precursor L-DOPA Interaction with Lipid Membrane** Osei Emmanuel	207
3:15 PM	**Confinement Potentials in Lipid Membranes** Abhinav Ramkumar	207
3:30 PM	**Interaction of Perfluoroalkyl Substances with Lipid Membranes** Sekou Koisiah	207
3:45 PM	**Time of First Return in Boolean Networks** Hope D. Gerst	207
4:00 PM	**Examining the Stability of the Van der Pol Oscillator using Gauge Functions** Nathaniel Viewegh	207
4:15 PM	**Search for Photon–Magnetic Field Coupling Effects in 241-Am Decay** Gunjan Akbari	207
4:30 PM	**Section Meeting**	

Schedule of Oral Presentations

Plant Systematics & Biodiversity

Sponsored By: Central Indiana Land Trust

Time	Presentation Title & Presenter	Room
12:15 - 1:30 PM	**Academy Lunch**	**White River A-E**
1:45 PM	**Gleanings from Deam's Flora of Indiana: The Good, The Bad, and The Priceless** Michael Homoya	204
2:00 PM	**Revision of Panicum L. (Poaceae) sensu stricta in Indiana** Nathanael J. Pilla	204
2:15 PM	**Graminoid Inventory of the Sandin Property in La Porte County, Indiana: Evaluating Taxonomic Subsets using the Floristic Quality Assessment** Derek Nimetz	204
2:30 PM	**Larimer Fen Mitchell's Satyr Butterfly Surveys and Other Findings: June 2025** Max Gerke	204
2:45 PM	**Non-native Brambles (Rubus spp.) that are Spreading within Indiana** Scott Namestnik	204
3:00 PM	**The Vascular Plants of Atherton Island Natural Area, Parke County, Indiana** Richard Hull	204
3:15 PM	**Analysis of the Floristic Quality of the Upland Woodland at White River Woods, Delaware County, Indiana** John Taylor	204
3:30 PM	**Estimating the Age and Phylogenetic Placement of Rare and Extinct Oceanic Island Endemics** Katie Greene	204
3:45 PM	**Distribution and Characteristics of the Newly Invasive Yellow-Flowered Teasel** Natalie Zagorski,	204
4:00 PM	**Floristic Inventory on Four Northern Indiana Sites** Nathanael J. Pilla	204
4:30 PM	**Section Meeting**	204

Schedule of Oral Presentations

Science Education

Sponsored By: Science Education Foundation of Indiana

Time	Presentation Title & Presenter	Room
12:15 - 1:30 PM	**Academy Lunch**	**White River A-E**
3:00 PM	**Development of Lead Poisoning by Educational Classes** Khaled Masharqa	201
3:15 PM	**Geoscience Identity and Belonging in Science: Student and Graduate Perspectives on Undergraduate Geoscience Education** Carrie Wright	201
3:30 PM	**Disaster! - A Serious Game about Atmospheric Hazards** Dr. Nathan Hitchens	201
3:45 PM	**From Molecules to Medicine: Teaching the Drug Discovery Pipeline in a Research-Centered STEM Camp** Erika B. Sorensen	201
4:30 PM	**Section Meeting**	201

Schedule of Oral Presentations

Zoology and Entomology

Sponsored By: Indiana Herpotological Society

Time	Presentation Title & Presenter	Room
12:15 - 1:30 PM	**Academy Lunch**	**White River A-E**
1:45 PM	**Distribution and abundance of reptiles and amphibians at Chelsea Flatwoods Nature Preserve (Chelsea, Indiana)** Flick, Shane	205
2:00 PM	**A minute resurrection: Rejected synonymy and male description of Ceratinopsis tybeensis (Araneae: Linyphiidae)** Stahl, Taylor	205
2:15 PM	**Exploration of the antimicrobial potential of honey bee (Apis mellifera) propolis** Ammons, Andrew	205
2:30 PM	**Sensitivity of echinoderm immunological systems to temperature fluctuations: Changes in anticoagulant and antioxidant properties** Rahman, Noshin Atiya	205
2:45 PM	**A new species of sheet weaving spider, Pelecopsidis ozark (Araneae: Linyphiidae)** LaFlair, Holly	205
3:00 PM	**Why Indiana mayflies are being lost (Insecta: Ephemeroptera)** Jacobus, Luke M.	205
3:15 PM	**The use of nutraceuticals in growth enhancement and inflammatory gene modulation in largemouth bass and predictive modeling for long-term efficiency determination** Khaled, Shah Sumaiya	205
3:30 PM	**Indiana insect diversity: What do we know and where do we go from here** Johnston, M. Andrew	205
3:45 PM	**Effects of five nutraceuticals on growth performance and health status of hybrid catfish** Deng, Elena	205
4:30 PM	**Section Meeting**	205

Schedule of Oral Competition

Undergraduate Investigators

Inclusive of undergraduate students, undergraduate interns, individuals in post-bac academic programs that are preparing for application to professional or graduate school, and high school students involved in supervised research in industry or college/university laboratories at the time research was performed

Time	Presentation Title & Presenter	Room
2:30 PM	**Analysis of intra-annual radial growth patterns in southeastern Indiana forests** Chet Paulsen	White River A-E
2:45 PM	**Associations of metabolic and inflammatory mediators in human milk with infant growth and body composition in the first 6 months of life** Chandhini Suresh	White River A-E
3:00 PM	**Native Tree Canopy and the Effects on Soil Invertebrate Diversity, Microbes, and Ecological Function in Urban Sites** Milo Moss	White River A-E
3:15 PM	**Serial Sampling and Stable Isotope Analysis of Tusk Enamel belonging to Flat-Headed Peccary** Isaac Morris	White River A-E

Schedule of Oral Competition

Post-baccalaureate Investigators

Inclusive of industry and academic interns, graduate students, medical/health professional students, medical or postdoctoral fellows, and/or interns

Time	Presentation Title & Presenter	Room
2:30 PM	**The role of DFM1, HRD1, and STE24 in translocon quality control in Saccharomyces cerevisiae** James A Avaala	White River F-J
2:45 PM	**Morphological Variation of the Crista Galli Utilizing Postmortem Computer Tomography (PMCT)** Chastity Gilbert	White River F-J
3:00 PM	**Long NonCoding RNAs in Paclitaxel Chemoresistance** Kenneth Pin Cheng Pan	White River F-J
3:15 PM	**Phylogenomics Reveals Congruence, Conflict, and Reticulate Evolution in Spermacoceae (Rubiaceae)** Nusrat Huda	White River F-J

Poster Presentations by Number

Odd-numbered posters will present from 10:00-10:45; Even-numbered posters will present from 11:00-11:45

Poster Number	Poster Title & Presenter
1	Optimization of GAN Architectures for Synthetic Image Generation **Dr. Debanjali Banerjee**
2	Comparative Analysis of a Two-Stage Deep Learning Framework for ACL Tear Detection in Knee MRI **Dr. Debanjali Banerjee**
3*	Development of a Live Scoring App for Track Cycling **Stephanie Lawrence**
4	Integrating HYSPLIT Trajectory Modeling and Stable Isotopes to Characterize Moisture Sources in the Northern Tropical Andes **Alejandra Rodriguez-Abaunza**
5*	Chasing the Sun: Comparing Geospatial Models with IUN Solar Data **Mykhaylo Severinov**
6*	Implementing Green Infrastructure in Terre Haute: Low-Impact Strategies for Urban Stormwater Management **Sierra Snowden**
7*	Title **Oluwatomilola Femi-Adejuwon**
8*	Integrating Computational Modeling and Experimental Analysis to Characterize Autophagosome Size and Number **Rakan Alnsour**
9*	Predicting Vacuole Autophagy in 3-Dimensions with Generative Neural Networks **Evan Snowgold**
10*	INTERACTION OF ACETAMINOPHEN WITH MODEL LIPID MEMBRANES **Rahber B. Syedae**

***Emerging Scientist Research Poster Competition**

Poster Presentations by Number

Odd-numbered posters will present from 10:00-10:45; Even-numbered posters will present from 11:00-11:45

Poster Number	Poster Title
11	Analysis of New and Archival Data on Eclipsing Binary Star TIC 262032874 **Sara Chaudhry**
12	Modeling and O-C Analysis of NSVS 5196635 and ASAS J081500-5743.4 **Wyatt Baxter**
13	An O-C Analysis of the W UMA Type Star ASAS J000425-5346.4 **Gavin Kling**
14	Numerical Modelling of a Third Light in NSVS 6103255 **Ashlee Martin**
15	Analysis of Short-Term Eclipsing Binary NSVS 1088506 **Caleb Whitcomb**
16	Megacrysts and Xenoliths from the Grants Intrusive Breccia: Insights into Mantle Metasomatism **William Myers**
17*	Phosphorus Diagenesis in Lake Tanganyika Core TANG16-5B-1G **Jaylen Price**
18	Phytolith-based reconstruction of vegetation variability over the Zambezi River basin using marine sediment core U1477, Expedition 361 **Madiha Hassan**
19*	Uneven sediment filling inside the Ordovician Rafinesquina from near Manchester, western Dearborn County, Indiana: post-mortem scavenging or soft part molding? **Bethany Cisz**
20	Heavy Metal Analysis of Markle Mill Dam Sediments, Terre Haute, Indiana **Hallie Townsend**

***Emerging Scientist Research Poster Competition**

Poster Presentations by Number

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Poster Number	Poster Title
21*	Mineralogical Controls on Lead Bioavailability and Geochemical Partitioning in Amended Garden Soils **Jeffrey Buell**
22	Comparison of historic stratigraphic nomenclature of part of the Indiana Upper Ordovician– an example from a composite section in Madison, Ind., and Milton, Ky **Mason Frauhiger**
23*	Spatiotemporal Dynamics of Freshwater Algal Assemblages **Fatma Badie**
24	Exploration of Microplastic Contamination in Water Sources of Terre Haute, IN **Clara Westcott**
25*	Investigating How Migration and Weather Affect Bird-Building Collisions and Bird Populations on The University of Indianapolis' Campus **Cassara Randall**
26	What should we do about cultivated mushroom invasions? **Jeffery Stallman**
27*	Interacting Impacts of Climate and Pasture Management on Grassland Birds and Plants **Jaime J. Coon,**
28*	Using Citizen Science & Machine Learning to Track Individual Sea Turtles in the Florida Keys **Mary-Katheryn Dunderman**
29*	Dimensional Stability and Creep Performance of Glass Fiber Reinforced Thermoplastic Polyurethane as a Recyclable Alternative to Fiberglass Epoxy Composites for Wind Turbine Blade Applications **Olivia Snell**
30	**HEAVY METAL CONCENTRATIONS IN SEDIMENTS OF THE WHITE RIVER WATERSHED IN ANDERSON, INDIANA: A PRELIMINARY STUDY** **Paa Kwesi Mbroh**

***Emerging Scientist Research Poster Competition**

Poster Presentations by Number

Odd-numbered posters will present from 10:00-10:45; Even-numbered posters will present from 11:00-11:45

Poster Number	Poster Title
31*	Ibuprofen Behavior in Natural Waters **Hayden Netral**
32	Assessing Potential Coal-Ash Contamination in the White River Noblesville: Case Study **Dorothy Gidisu**
33	Tracking Sources of Fecal Pollution in the White River at Muncie: A Case Study **Mabel Kumi**
34	A Comprehensive Survey of the Unionid Mussel Community of the Upper West Fork White River in Delaware County, Indiana (Map Display) **Sam Gradle**
35*	Determination of the Roles of Keratin 18 and 19 in Early Xenopus laevis Development **Elisabeth Pennington**
36	Activity timing in an open-cup nesting bird: individual repeatability and environmental effects **Andrea S. Grunst**
37*	Tree and Bird diversity in three urban greenspaces in South Bend, Indiana **Kitty Koontz**
38*	Plant-insect-fungal interactions in White False Indigo (Baptisia alba) on Indiana tallgrass prairies **Lilith Rengstorf**
39*	Using Chromosome Numbers to Understand Evolution of Genomic Size of the Spermacoceae Tribe (Rubiaceae) **Peyton Rodgers**
40*	First Draft Genome of North American Bluets Using ONT Sequencing **Ainsley Tierney**

***Emerging Scientist Research Poster Competition**

Poster Presentations by Number

Odd-numbered posters will present from 10:00-10:45; Even-numbered posters will present from 11:00-11:45

Poster Number	Poster Title
41*	Investigating methods of chemical control for novel invasive yellow-flowered teasel **Molly Hobson**
42	Integrating GIS Technology for Enhanced Urban Forestry Education: A Redesign of the Butler University Tree Walk **Alexa Simpson**
43	Exploration of Temperature on the Growth Stages of Tomatoes, Solanum lycopersicum **Savanna Amschl**
44	Dendroarchaeological and Timber Analysis of Four Log Structures of Brown County State Park **Erin Terry**
45*	Fifty-Year Study of Post-Tornado Forest Succession in Happy Valley, Jefferson County, IN **Victoria Zwilling**
46	Fireflies of Indiana (Coleoptera: Lampyridae) **Amelia R. Meyer**
47*	Bridging Fragmented Habitat: Modeled Connectivity Zones Predict Zebra Swallowtail Occurrence **Caden Zuehsow**
48*	Insect Fragment Analysis of Big Brown Bat (Eptesicus fuscus) Guano During Brood X 2021 Emergence **Surraya Wagner**
49*	Comparing Family-level Insect Diversity Between Habitats at the DePauw Nature Park **Sahit Liyanage**
50*	A comparison of field and experimental observations of arboreal behavior in multiple species of fossorial salamanders **Marieke Young**

***Emerging Scientist Research Poster Competition**

Poster Presentations by Number

Odd-numbered posters will present from 10:00-10:45; Even-numbered posters will present from 11:00-11:45

Poster Number	Poster Title
51	An Archaeological Survey of Salamonie River State Forest, Wabash County, Indiana **Nolan Sterns**
52	An Accessory Head of the Biceps Brachii: Clinical Implications from a Gross Anatomy Case Study **Layken McGuire**
53*	A Human Case Study of a Rare Morphological Variation of the Liver **Natalie Reynolds**
54	An Anatomical Dissection Case Study of a Rare Left Pleuro-Pericardial Cyst in a 90+ Year Old Donor **Peytin Penny**
55*	A Case Study of a Rare Accessory Muscle in the Human Leg **Amanda Walker**
56	Assessing patient knowledge and perceptions of physicians, physician assistants, and nurse practitioners in a primary care clinic in Indiana **Yasmin A. Ali**
57*	HIPAA Noncompliance of Radiologic Images Shared on Social Media **Shreyas Bulusu**
58*	Food Is Medicine: Medically and Culturally Tailored Food Preferences **Alyssa Reinoso**
59	A Recruitment Process for the Perinatal Lifestyle Drivers Study that Leverages the Indiana Community Learning Health System **Armando Peña**
60*	Characterizing the Literature of Associations Between Appetite-Related Hormones, Appetite, and Adiposity in Infancy: An Ongoing Scoping Review **Annelise Stolarz**

***Emerging Scientist Research Poster Competition**

Poster Presentations by Number

Odd-numbered posters will present from 10:00-10:45; Even-numbered posters will present from 11:00-11:45

Poster Number	Poster Title
61	Characterizing Total, Regional, and Ectopic Adipose Tissue Fat Content and Diabetes Risk Factors among Youth Using Lancet Commission Obesity Definitions **Macy Lei Shepard**
62*	Examining Inflammatory Markers as Mediators of Obesity-Induced Reductions in Insulin Sensitivity among Latino Youth **Zoe Barnsfather**
63*	Evaluating Pragmatic Estimates of Insulin Sensitivity Against the Hyperinsulinemic Euglycemic Clamp in Early and Late Pregnancy **Shiv Patel**
64*	Co-designing a Community-Based, Multi-Systems Lifestyle Intervention for Preventing Gestational Diabetes **Saida Nassour**
65*	Weight Stigma as an Overlooked Driver of Inflammation and Cardiovascular Disease Risk **Kaitlyn Mathews**
66	Assessment of Sex Differences in Urethane-Induced Lung Tumorigenesis in the Four Core Genotype Mouse Model **Maksat Babayev**
67*	Bioinformatics Analysis of Gene Expression in Lynch Syndrome Progression **Drithi Raipet**
68*	Investigating the Expression of Cyclin E1 (CCNE1) in Mantle Cell Lymphoma **Faith Sponseller**
69*	Title **Palak Jha**
70*	RADical Imaging: Stratifying Lung-RADS 0 with Inflammatory Markers **Vedika Vyas**

***Emerging Scientist Research Poster Competition**

Poster Presentations by Number

Odd-numbered posters will present from 10:00-10:45; Even-numbered posters will present from 11:00-11:45

Poster Number	Poster Title
71	A Rapid, Reproducible AI-Assisted Tool for Generating Course-Aligned Anki Decks in an Accelerated Biomedical Sciences Master's Program **Martin Matov**
72	From Indianapolis to Nairobi: How the NeoInnovate Collaborative Consortium at Indiana University Indianapolis Creates Award-Winning Global Research Opportunities for Students **Sherri Bucher**
73	A STEM Collaboration with Two African American Sistas in the Academy: "More than Me: Exploring the Environments Around Us" **Dr. Rona M. Robinson-Hill**
74*	Empowering The Community With Environmental Chemistry In The Classroom **Eshaan Patel**
75	Needs Assessment of 3D-Printed Anatomical Models for Indianapolis Secondary School Life and Health Sciences Education **Dakota R. Merkel**
76*	From Brain to Build Plate: 3D Printing the Cerebral White Matter for Neuroanatomy Education **Salma Kherallah**
77	From Implementation to Impact: Multi-Year Outcomes of Anatomage Table Integration in Anatomy Education **Elizabeth McEntee**
78	Charles Bonsett, M.D., 1921-2020, medical historian extraordinaire. **Dr. Richard Feldman**
79	Do Spiders Share More Genes With Humans or Flies? Orthologs Reveal the Answer **Katherine Bowman**
80	America steps to the world stage with Philadelphia's 1876 International Medical Congress Rubbing elbows with the world's greatest surgeon and some notable Hoosiers **Olivia DeHaven**

***Emerging Scientist Research Poster Competition**

Poster Presentations by Number

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Poster Number	Poster Title
81	Vaccination Rate Changes Among Hoosier Youth: County-level Trends and Predictors Before and After the COVID-19 Pandemic **Isaac Masquelier**
82	IAS leaders frequently showed an interest in History of Science over the Academy's140 year history and many of them made presentations at the annual meeting. **Dr. Rex Bickers**
83	Light Scattering Technique for the Study of Molecular Adsorption onto Heterogeneous Colloidal Microplastics **Clayton Snider**
84*	Paper-Based Microfluidic Devices from Hydrophobic Ionic Liquid for Colorimetric Detection of Disease Biomarkers **Auden DeCaprio**
85*	Enantiomeric recognition of flavor compounds using amino acid-based chiral ionic liquids **Lily Haley**
86	Synthesis and Evaluation of Biological Activity of Novel Highly Substituted Pyrroles and Pyrrolidones **Kaitlyn Rochester**
87	Synthesis and Evaluation of Penta-substituted Pyrrolidones with Ester Group in the Third Position **Jakob Morton**
88*	A fluorescent ionic liquid nanosensor for forensic detection of gamma-hydroxybutyrate drug **Will Mawhorr**
89*	An ionic liquid nanosensor for dual colorimetric and fluorescent detection of gamma-hydroxybutyrate drug **Donita Wright**
90	Reaction of Spirooxindoles in the Presence of Trifluoroacetic Acid as a Catalyst **Sam Stucko**

***Emerging Scientist Research Poster Competition**

Poster Presentations by Number

Odd-numbered posters will present from 10:00-10:45; Even-numbered posters will present from 11:00-11:45

Poster Number	Poster Title
91	Natural Product-Based Dye Sensitized Solar Cells in Series **Arianna Cooley**
92	In Vitro Photodynamic Assessment of Photosensitizer-Antibiotic Conjugates Against Lung Cancer Cell Line **Kailey M. Callander**
93*	Using UV and Diffuse reflectance spectroscopy to analyze photodegradation of silver doped nickel tungsten as nanostructures **Jordan Smith**
94	Investigation of Substrate Tunnel Remodeling as a Generalizable Strategy through Biphenyl Dioxygenase Engineering" **Madilyn Shepherd**
95*	Liposome nanoparticles for the delivery of combinatorial therapeutic agents with doxorubicin and IR820 near-infrared ionic dye against cancer **Eric Fettinger**
96*	Metabolomic and Functional Differences Between EDL and SOL Muscles in SUCLA2-Deficient Mice **Clark Chustz**
97	Computational Modeling and Analysis of Improved Rieske Dioxygenase Variants **Corbin Prince**
98*	Investigating exercise to mitigate muscle dysfunction in SUCLA2 KO models within EDL vs SOL **Luna Holley**
99*	Tyrosine Nitration of Apolactoferrin by Peroxynitrite Alters Metal Affinity **Jetta Harmon**
100	"Application of Rational Enzyme Engineering in the Development of Improved Naphthalene Dioxygenase Variants" **Reece Dale**

***Emerging Scientist Research Poster Competition**

Poster Presentations by Number

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Poster Number	Poster Title
101*	Absence of Brain Glycogen Decreases Incidence of Loss of Righting Reflex during Insulin-induced Hypoglycemia **Alyssa McDonald**
102*	Muscle Glycogen Concentration Predicts Strength and Endurance in Transgenic Mouse Models **Raina L. Wolf**
103	Development of Improved Cumene Dioxygenase Variants through Substrate Tunnel Remodeling **Madison Kasten**
104*	Physiologic responses of Hypoxia **Avery Renshaw**
105	Analysis of Phytocannabinoid Effects on Macrophages **Radmila S. Stanic**
106*	Brain glycogen does not reduce severity of pilocarpine-induced seizure in mice **Mathilda A. Geyer**
107	Evaluating Antioxidant Status of a Ginger- and Curcumin-Supplemented Pesco-Vegetarian Diet Intervention **Annastasia Hutchings**
108*	Requirement of Microtubule Stability in Degradation of Aberrant Proteins **Kaikeyi M. Paxton**
109*	DHX36/G4R1 Knockdown Rescues Stress Granule Density in C9orf72 ALS Neural Progenitor Cells **Chance S. Creviston**

***Emerging Scientist Research Poster Competition**

Poster Presentations by Number

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Poster Number	Poster Title
110*	Polycomb (Pc) and Polycomb group genes (PcG) regulate cardiac patterning by repressing trithorax (trx)-mediated Hox expression in the embryonic heart tube. **Md. Sayeed Abu Rayhan**
111*	Reconstructing the Fox transcription factor-regulated modular subnetworks mediating distinct cardiac progenitor cell divisions **M. Rezaul Hasan**
112	Investigating the Role of TRAF2 in Chemotherapy Resistance in T-Cell Acute Lymphoblastic Leukemia **Isabella Torres**
113*	Establishing a Genetic Tool to Induce Multinucleated Polyploidy in Drosophila Tissues **Krista Cottom**
114*	Elucidating the Effect of Diet on Intestinal Stem Cell Division in the Drosophila midgut **Devyani Purohit**
115*	Drosophila Spalt genes in heart development and their relevance to human congenital heart defects **Mofazzal K. Sabbir**
116*	Roles for jumeau and Checkpoint suppressor 1-like in alary muscle morphogenesis: expanding the cardiogenic functions of Fox genes **Kuncha Shashidhar**
117*	Unraveling the mechanism of Fox transcription factor-driven Polo kinase activation during cardiac progenitor cell division **Rajnandani Katariya**
118	p53 inhibits 2-chloroethyl ethylsulfide (2-CEES)-induced centrosome amplification in human osteosarcoma cells (Saos2) **Richard A. Bennett**
119*	Assessing the impact of Nicotine during coronary artery vessel development in mice **Kenneth Reed**

***Emerging Scientist Research Poster Competition**

Poster Presentations by Number

Odd-numbered posters will present from 10:00-10:45; Even-numbered posters will present from 11:00-11:45

Poster Number	Poster Title
120*	Differential Signaling and Functional Outcomes of APELIN and ELABELA in Venous and Arterial Endothelial Cells **Rupak Parajuli**
121*	Oxidative Stress Reveals Distinct Roles of FSHR-1 and its Ligands in C. elegans **Joshua R. Gerber**
122*	Intestinal regulation of neuromuscular function by the glycoprotein hormone receptor, FSHR-1 **Lillian Groves**
123	Targeted Silencing of DHX36/G4R1 in C9orf72 ALS/FTD and Impacts on Stress Granule Abundance. **Nana Akua O. Koranteng**
124*	Oncogenic Ras Induces Biomechanical Stress-Mediated EMT in the Drosophila Wing Disc **Kaleigh Kelley**
125*	Elucidating the Molecular and Cellular Mechanisms of Ras-Induced Cyst Formation in the Drosophila Wing Disc **Jaxon Howell**
126*	Pathways of Protein Degradation and Stress Tolerance During Translocon Clogging **Hailey J Barton**
127*	Beyond the Proteasome: Hidden Sources of Peptide Degradation **Cole J. Shifferly**
128*	Who's Cleaving What? Defining the Enzymes Behind CT-L Activity in C. elegans **Hugh T. Ford**
129*	Determining whether hypoxia stimulates DHX36 and SOX17 expression in coronary endothelial cells **Kendra Eller**

***Emerging Scientist Research Poster Competition**

Poster Presentations by Number

Odd-numbered posters will present from 10:00-10:45; Even-numbered posters will present from 11:00-11:45

Poster Number	Poster Title
130	The pseudo-kinase EphB6 receptor can act as a "loser" gene in human cancer cell competition **Masaru Nakamoto**
131*	Investigating the Molecular Mechanisms of Ras Tumor Cell Regression in the Drosophila midgut **Dreama Cronin**
132*	Establishing a Genetic Tool to Induce Multinucleated Polyploidy in Drosophila Tissues **Haley Lorey**
133*	Cellular Characterization of Mesenchymal-like Cells Derived from Ras-induced Biomechanical Stress-mediated EMT in the Drosophila Wing Disc **Phillip Bilby**
134*	Regulation of SYD-2/Liprin Alpha in GABA motor neurons **Sarah Daly**
135*	The Role of Dfm1 in the Hrd1 Translocon Quality Control Pathway **Sudhee Bommineni**
136	Elucidating the Molecular Mechanisms Underlying Tumor Cell Expansion in Drosophila Myoblasts **Woasifur Rahman Chowdhury**
137*	Retinal Vasculature Changes in a Model of Papilledema **Maggie Evans**
138*	Putting the Puzzle Together: Hyperadhesive Desmosome Protein Complexes in Early Vertebrate Embryonic Ectoderm **Rochelle M. Maxson**
139*	Effect of Lipid Chain Length on Structural Dynamics of ABC Transporter Sav1866 **Divya Rajendran**

***Emerging Scientist Research Poster Competition**

Poster Presentations by Number

Odd-numbered posters will present from 10:00-10:45; Even-numbered posters will present from 11:00-11:45

Poster Number	Poster Title
140*	Targeting CPSF73 to Inhibit Adenovirus Replication **Cal Swartzendruber**
141*	Effect of simulated microgravity on Candida albicans resistance to caspofungin and fluconazole **Kendall Carter**
142*	Effect of estrogen on Candida albicans filament growth in the presence and absence of an epithelial layer **Matthew Gaetano**
143	Translocation of Pus7 within C. albicans **Taylor Smith**
144*	Identification of Candida albicans Mutants that can Filament in the Presence of Hygromycin B **Vivana Bhagat**
145*	Comparative Analysis of Gene LDH, and MDH in the Puerto Rican Parrot, and Chicken **Mariana Berdugo**
146*	Developing DNA Barcodes for Species Identification of North American Azaleas **Alexis Cantrell**
147*	The effects of abnormal temperature patterns on Batrachochytrium dendrobatidis density and size in vitro **Megan Lawson**
148	Agricultural Microbes as a Source of Antimicrobials **Mana Shahrokhi**
149*	Widespread Multi-drug-Resistant Bacteria and Resistance Genes in Indiana's Reservoirs **Ashley Durnil**

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Poster Number	Poster Title
150*	Evaluation of Antibiotic Resistance and Species Identification of Gram-Negative Bacteria from the Geist Reservoir **Kiley Wardwell**
151	Characterizing PUG1 mutants in the opportunistic fungal pathogen Candida auris **Summer Davis**
152*	Efficacy of MCP-1 in C. neoformans killing by CITED1 Knockout Macrophages **Garrett Roberts**
153*	CITED1 Effect on Macrophage Apoptosis when Exposed to Cryptococcus neoformans **Claire Kinder**
154	A Potential Role for DHX36/G4R1, a G4 helicase, in Genomic Maintenance in C9orf72 ALS/FTD **Kelsey Slattery**
155*	Using LUHMES cells to measure MST-312's impact on Herpes Simplex Virus Latency **Kayli Liles**
156*	The Effect of Fetal Alcohol Spectrum Disorders on Development of the Hippocampus in Relation to ADHD-Like Behaviors **Ash Bishop**
157	Dose-Dependent Inhibition of hRSV and Clinically Relevant Pathogens by Mānuka Honey Without Cytotoxic Effects **Grant Ipsen**
158*	Analysis of Previously Reported SARS-CoV-2 3CLpro Inhibitors for Broad Neutralizing Activity Against the 3CLpro of Human Common Cold Coronavirus Strain HKU1 **Sahar Atmar**
159*	SARS-CoV-2 3CLpro Inhibitors Exhibit Neutralizing Activity Against the 3CLpro of Human Common Cold Coronavirus Strain OC43 **Aarish Sakib**

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Poster Number	Poster Title
160	The Role of RIPI in T-Cell Acute Lymphoblastic Leukemia Chemoresistance **Katelyn Ellison**
161*	Defining supporting structures: the Back seat driver kinase orchestrates the development of heart-anchoring alary muscles. **Brady Matthew Verdon**
162	Physics begets biophysics, from the early 1900s to the 1950s. Its role in the birth of twentieth century molecular biology, with a focus on Nobel laureates and legendary Hoosiers who made crucially important contributions **Dr. Paul Todd**
163	
164	An Indiana History of Solar Eclipses: Connecting Science to Community **Sarah J. Reynolds**
165	
166	
167	

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