REGIONALS
at the ROTUNDA
UNDERGRADUATE RESEARCH 2025

Welcome FROM THE PRESIDENT

I am honored to welcome you to the capitol today as Indiana University's regional campus students showcase their extraordinary research achievements. From advancing cancer treatments and environmental sustainability to addressing community health challenges and analyzing social issues, their work demonstrates the breadth of talent and ingenuity across our state.

Our regional campuses are powerful engines of opportunity, delivering profound benefits across Indiana through both research innovation and meaningful service. When students collaborate with our accomplished faculty, they develop the hands-on expertise that Indiana employers are seeking while driving discoveries that matter. With over $1 billion in economic impact, these campuses are essential to Indiana's progress and prosperity.

The research presented here reflects what makes our regional campuses remarkable centers of excellence. By cultivating the next generation of leaders, advancing knowledge that matters, and elevating the communities they serve, these campuses create lasting impact that ripples well beyond county lines. I am inspired to see our students embracing their potential to make such important contributions to Indiana's future.

Pamela Whitten

INDIANA UNIVERSITY

PAMELA S. WHITTEN
President of Indiana University

> "The Regionals at the Rotunda showcases the real-world impact of student work in their respective academic fields."

KEN IWAMA
Vice President for Regional Campuses and Online Education

With approximately 18,000 students enrolled at IU's five regional campuses, our regional institutions are invaluable to our state in propelling the socioeconomic mobility of students who live and work in our local communities.

One of our many strengths is providing the incredible opportunity for our undergraduate students to engage in research and creative activities across all academic disciplines. Each year, undergraduate research conferences take place at every regional campus, showcasing the real-world impact of student work in their respective academic fields. The Regionals at the Rotunda brings this dynamic innovation, energy, and academic excellence to the capitol.

The outstanding research and scholarship activities represented by the students selected for our inaugural Regionals at the Rotunda demonstrate how regional campuses prepare students for successful careers, amplify the vital work of their faculty mentors, and improve the lives of all Hoosiers. Our service to the state is the hallmark of IU East, IU Kokomo, IU Northwest, IU Kokomo, IU South Bend, and IU Southeast-Indiana University's proud regional campuses.

Thank you

Regionals at the Rotunda Planning Committee Members

Rebecca Carlton
Seuth Chaleunphonh
Sarah Heath
Lafayette Jordan
Meghan Kahn
Darren Klein
Jennifer Maurer
Stacie Merken
Dianne Moneypenny
Patrick Motl
Philemon Yebei
Christopher Young

THE VALUE OF **ENRICHMENT**

The regional campuses
CONTRIBUTE MORE THAN
$1 BILLION
in additional
ECONOMIC IMPACT

91% CAREER OUTCOME RATE
(placement rate) based on the 2022-2023 alumni survey

62.4% OF ALUMNI
are employed in Indiana
(2022-2023 alumni survey)

3 OF 5 CAMPUSES ARE TIER 1
for ECONOMIC MOBILITY, recognized by Third Way (2023)

The Power of Regionals & ECONOMIC MOBILITY

Indiana University's regional campuses are engines of opportunity and growth, delivering profound benefits to students and communities across the state. With approximately 18,000 students enrolled and contributing more than $1 billion in economic impact, these campuses are vital to Indiana's progress and prosperity. Proudly supporting underrepresented and first-generation students, with 28% of students breaking new ground as the first in their families to attend college, these campuses are also national leaders in economic mobility, helping to build a stronger, more resilient Indiana.

85%
OF STUDENTS
are Indiana residents

28%
OF STUDENTS
are first-generation

119%
INCREASE
in research participation
from 2020–2021 to 2023–2024

39% **OF STUDENTS**
are from rural areas

92%
OF GRADUATES
secure jobs related
to their field of study

78.4%
OF ALUMNI
expect higher future
earnings than their
childhood household

Sources: First Destination Survey (2024), National Alumni Career Mobility Survey (2024), Third Way (2023), EMSI (2020)

Local impact

Indiana University's regional campuses are key drivers of innovation and economic growth, fostering collaborations among organizations that address regional challenges. Through collaboration with industry leaders, they conduct impactful research and align academic programs with local industry needs, creating opportunities for hands-on learning and supporting entrepreneurship.

Economic mobility

By offering accessible, affordable, high-quality education, IU regional campuses equip students with the skills and credentials needed to achieve higher-paying jobs and build successful careers, opening doors to upward mobility—particularly for first-generation college students and underrepresented populations in rural and urban counties.

Advancing research

IU regional campuses are at the forefront of research that fuels innovation, solves real-world challenges, and drives Indiana's economic growth. Their research addresses pressing issues in key areas such as healthcare, sustainability, technology, and workforce development, delivering impactful solutions that strengthen local communities and extend far beyond.

INDIANA UNIVERSITY
EAST

Indiana University East is committed to strengthening the community through civic engagement, partnerships, and educational opportunities. Offering a variety of degrees and certificates through its Richmond campus, online programs, and off-campus sites, IU East empowers students to grow while contributing to the region's cultural and economic development.

Total economic impact:
$64.4M
ADDED INCOME

26%
OF FALL 2024 STUDENTS
are first-generation

60.1%
OF STUDENTS
are from rural areas

Dennis M. Rome
Chancellor, Indiana University East

“By providing student support services that focus on academic enrichment, financial resources, and social support, both inside and outside the classroom, Indiana University in this region seeks to be the catalyst for life-changing academic and career experiences.”

DESTINY MCMANUS
Senior, Biochemistry major, Portland, IN

YHR039C in *Saccharomyces cerevisiae*

and Potential Role in ER

A budding yeast, *Saccharomyces cerevisiae*, is a model organism for biomedical research and an important microorganism in the biotechnology industry. In the IU East region, Liberation Labs has broken ground for a brand-new facility in Richmond, Indiana. Liberation Labs grows yeast using precision fermentation, an emerging technology, to produce proteins used for food, materials and other products. In this research project, the goal was to better understand yeast genes. *Saccharomyces cerevisiae* has multiple genes throughout the genome for which the function is still unknown, including *YHR039C*. Using bioinformatics, this study found that *YHR039C* is predicted to be localized to the endoplasmic reticulum and may play a role in ergosterol production. To create a knockout yeast strain, *YHR039C* was replaced in the yeast genome with *URA3* using a PCR-based strategy. Then, a confirmation PCR reaction validated the successful disruption of *YHR039C*. Finally, the growth of the knockout strain was tested against different stress conditions -fluconazole, ethanol, and dithiothreitol- using multiple rounds of spot assay to observe cell growth. Preliminary results showed that ethanol and DTT stress impacted *YHR039C* cell growth most significantly. Future work will investigate additional stress conditions to learn more about the function of this yeast gene.

Dr. Jill Schweitzer

Dr. Schweitzer is assistant professor of biology and biochemistry at IU East. She received her Ph.D. in Biochemistry, Molecular Biology, and Biophysics from the University of Minnesota. Schweitzer completed postdoctoral research at the University of Notre Dame, where she investigated cell division and membrane trafficking using cell culture models. Her research interests are in molecular and cellular biology and biochemistry, investigating the function of unknown genes in yeast, and understanding the determinants of yeast cell polarity.

JENNIFER TUCKER
Senior, Mathematics major, Belleville, MI

Marion County Crime Rate Analysis

Based on Social, Economic, and Environmental Factors

Crime rates in metropolitan areas stem from social, economic, and environmental factors. This study examines these factors through the use of county-level data from the United States to identify root causes and explore possible interventions. Four key determinants - adverse childhood experiences (ACEs), economic indicators, mental health, and environmental conditions - were analyzed using a linear regression model against a crime factor. Results show that ACEs and mental health factors are the strongest predictors of increased crime rates. This study is focused on Marion County, Indiana, and aims to support the development of current and future interventions addressing income inequality, educational disparities, lack of mental health resources and accessibility, and environmental challenges, such as pollution, blight, and "food deserts" (areas with limited or no access to fresh groceries in a given neighborhood). By targeting these root causes, there is evidence suggesting that crime rates can be effectively reduced.

Dr. Young Hwan You

Dr. You is associate professor of mathematics at IU East. He received his Ph.D. in mathematics at Purdue University. His research interests are partial differential equations, social science based on statistical analysis, mathematical finance, data science application including deep learning and machine learning.

Dr. Hee Seok Nam

Dr. Nam is assistant professor of mathematics at IU East and received his Ph.D. in mathematics at Seoul National University. Nam teaches a variety of courses, primarily in the actuarial science program, and his research focuses on mathematical and actuarial approaches to spreadable disease models.

Using Bacteroidales Genetic Markers

to Identify Fecal Pollution Sources in the East Fork Whitewater River Watershed in Indiana

Fecal pollution in aquatic systems is a significant environmental and public health concern but identifying its sources can be challenging due to various land uses and potential contributors. Between June and November 2024, 54 water samples were collected from six sites along the East Fork Whitewater River. Results showed fecal coliform levels ranging from 150 to 55,000 CFU/100 ml, with higher concentrations downstream. Rainfall worsened pollution by increasing runoff and stirring up sediments.

PCR testing revealed cattle-related markers in 46% of the samples. Additional testing will focus on detecting human, general, and Canada geese-associated sources. This study highlights the value of molecular techniques in addressing water pollution. Ongoing efforts will include tracing pollution sources through genetic analysis and gathering more data to enhance water quality, protect public health, and support sustainable practices in the East Fork Whitewater River watershed.

HUNTER JAYKOSKI

Senior, Biology major, Richmond, IN

DOUGLAS BALL

Junior, Biochemistry major, Arcanum, OH

Dr. Jia Xue

Dr. Xue is assistant professor of biology at IU East. He received his Ph.D. in Environmental Microbiology from Auburn University, specializing in the fate of biological contaminants in water and soil. His research focuses on water quality, particularly the identification of fecal contamination sources in surface water, microbial source tracking, and the persistence of host-associated genetic markers in water. Xue has contributed extensively to understanding the effects of environmental factors on the population dynamics of fecal indicator bacteria.

JESSICA ADCOCK
Sophomore, Criminal Justice major, Warsaw, IN

Understanding Substance Use Disorders and Addiction:

An Analysis of Theory and Prevention Strategies for a Local Context

This research project explores the process of addiction—what it is, the theories that explain it, and the local community resources available to address and prevent it. Addiction affects millions of people nationwide, including in Indiana, and holds personal significance for the student researcher as someone who has overcome drug addiction through long-term recovery. Extensive research was conducted using scientific journals to explore addiction through the lens of various criminological theories which offered valuable insights into the root causes of addiction and its complex relationship with social and psychological factors. The prevention and intervention aspects of addiction were explored through two local organizations: The Upper Room in South Bend, Indiana, and the Jail Chemical Addiction Program (JCAP) in Kosciusko County, Indiana. These organizations have a meaningful impact on the community by employing a comprehensive approach to addiction recovery. This study emphasizes the importance of understanding addiction's causes as a crucial first step toward addressing the crisis locally and beyond. By integrating theory with practical community solutions, this research highlights how everyone can combat addiction effectively and support recovery efforts in Indiana and our communities.

Dr. Carrie Mier

Dr. Mier served as faculty mentor for research projects by Jessica Adcock and Sarah Marshall. Dr. Mier is associate professor of criminal justice at IU East. She received her Ph.D. in Criminology and Criminal Justice from Florida State University. Her research interests include drug trends at national, state and local levels; community

SARAH MARSHALL
Junior, Psychology major, Carrollton, KY

Exploring the Local Coordinating Council (LCC) System in Indiana:

Benefits, Problems, and Solutions Using Local Case Studies from Five Indiana Counties

This research project examines the structure, function, and challenges of local coordinating councils (LCCs) in Indiana, which play a vital role in addressing drug issues within local communities. The research was conducted in four stages: first, information on LCCs from five counties in Indiana was gathered; second, the coordinators of these councils were interviewed; third, a survey to the Drug Free Wayne County Partnership, the LCC for the IU East area, was created and administered; and the survey results to identify problems and propose solutions, which were presented to the board of directors, were analyzed. Findings revealed key areas for improvement, including communication, networking, awareness, and involvement. Using successful practices from other LCCs across Indiana as examples, actionable recommendations to enhance the effectiveness of the Drug Free Wayne County Partnership were presented. This project is significant not only for the local area but for the entire state, as the LCC system operates in all 92 Indiana counties and has a substantial impact on addressing drug issues statewide. LCCs also play a critical role in distributing mini-grants to law enforcement, treatment providers, and education/prevention professionals, making it essential to evaluate their effectiveness in fulfilling their mission.

risk and resilience to substance issues; stigma; risk and protection to violence and victimization; and Scholarship of Teaching and Learning. She was inducted into the IU Faculty Academy on Excellence in Teaching (FACET) in 2022 and received the Emerging Community Engaged Scholar award and Faculty Fellowship project funding from the Community Engaged Alliance in 2022-2023.

INDIANA UNIVERSITY
KOKOMO

Indiana University Kokomo collaborates with regional partners, including other educational institutions, to strengthen the region by prioritizing community engagement as a key strategy. Service is embraced as a vital part of the responsibilities and experiences of faculty, students, and staff.

Total economic impact:
$130.2M
ADDED INCOME

92%
OF ALUMNI
are employed
in Indiana

89%
OF GRADUATES
report positive
career outcomes

Mark Canada
Chancellor, Indiana University Kokomo

"IU Kokomo and other regional institutions are 'engines of change,' making long-term positive impacts in their regions. Communities benefit since college graduates can do essential jobs, feeding the economy, and can bring knowledge and skills to bear on regional challenges in health, education, business, and more."

LEA MUMMERT
Senior, Biology major, Fort Wayne, IN

ALEX CARIE
Senior, Biology major, Noblesville, IN

The Evaluation of *Mycobacterium immunogenum*

in the Presence of Different Metalworking Fluid Chemicals

In the Midwest automotive industry, metalworking fluids are essential for their versatile functionality, but require frequent cleaning to prevent bacterial contamination. One bacterium that consistently appears in this industry, including plants in Indiana, is *Mycobacterium immunogenum*. This microorganism, known to cause respiratory infections, thrives in hard-to reach or infrequently disinfected areas. The objective of this project is to identify the chemical components of metalworking fluids that may serve as substrates supporting *Mycobacterium immunogenum* growth. Understanding these conditions is critical to mitigating contamination and addressing potential health hazards. In laboratory settings, both biofilm and planktonic growth of the bacteria were evaluated using various chemicals commonly found in metalworking fluids, including glycerol, pentaerythritol, benzotriazole, cresol, diethylamine, stearic acid, and itaconic acid. Based on many different experiments, it was found that glycerol and pentaerythritol supported the strongest growth.

Dr. Christian Chauret

Dr. Chauret is professor of microbiology at IU Kokomo. He received his Ph.D. in Biology from the University of Waterloo, in Canada. His research interests include water microbiology, waterborne diseases, water treatment, and environmental microbiology. He has published more than 30 research articles and book chapters in microbiology with various co-authors. He teaches courses in immunology, physiology, and microbiology.

BENJAMIN EARL
Senior, Computer Science major, Noblesville, IN

Accretion Belt Characteristics

in a Hydrodynamic Evolution of a Contact Binary

Approximately 85% of stars are in binary star systems. While more rare, about 1% of solar type stars are in a binary system where the two stars are close enough to share material. These so-called contact binaries must be stable and long-lived to be seen so frequently. The basic structure and evolution of contact binaries has remained enigmatic despite contact binaries having been recognized as a category for nearly a century. In this work, we compare characteristics of a common accretion belt of material that flows to encircle both stars in a simulated contact binary with analytical predictions developed previously by Stępień (2009). We find that the nearly steady-state accretion belt flow pattern that arises in our simulation confirms the predictions for the dynamic structure of an accretion belt posited by Stępień.

Dr. Patrick M. Motl

Dr. Motl is dean of School of Sciences and professor of physics at IU Kokomo, and Director of the IU Kokomo Observatory. His research focuses on the study of stars and compact objects through numerical simulations. He received his bachelor's degree from IU and his Ph.D. from LSU. He teaches courses in astronomy, physics, and computer science.

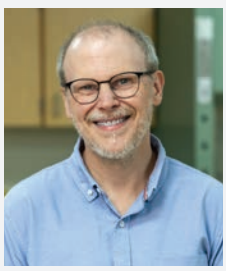
ASHLYN MORRICAL

Senior, Biology major, Gas City, IN

Egg Content Consumption

and the Origin of Embryo-egg Size Correlation in the Snapping Turtle (*Chelydra serpentina*)

Hatchling size often correlates with the size of eggs at laying, but the developmental interval when this correlation arises is unclear. We incubated snapping turtle eggs at 25°C and measured the total dry content and nonpolar lipid content of the eggs, as well as the mass of the preserved embryos at 40, 45, 50, 56, and 60 days into development. There was no correlation between embryo mass and initial egg mass between days 40 and 50, but a correlation appeared on day 56 and continued through the rest of incubation. Conversely, dry egg content mass and nonpolar lipid content correlated with initial egg mass between days 40 and 50, but not at days 56 or 60. Remaining eggs hatched between days 70 and 76. The results suggest that when incubation is ~75% complete and ~37% of the resources in the eggs have been consumed, differences in the amount of remaining resources among different-sized eggs lead to different rates of nutrient assimilation by the embryos and, as a result, differences in embryonic growth through the remainder incubation.



Dr. Michael S. Finkler

Dr. Finkler is professor of physiology at IU Kokomo. For more than 30 years, he has studied how interactions between embryos, eggs, and the nest environment influence hatchling quality in reptiles and birds. He also conducts research on sexual dimorphisms related to reproductive cost in amphibians and the geographic distribution and abundance of Indiana's native reptiles and amphibians.

BRANDY HAYES-MANNING
Senior, History major, Winamac, IN

Inter-Tribal Conflict

and Its Impact on Indigenous Tribes of the Great Lakes Region

This project aims to analyze the factors that caused inter-tribal conflicts in areas of the Great Lakes region. Attention was paid to resource competition, territorial disputes, and external pressures primarily stemming from European colonization. The goal was to gain a richer understanding of the social, cultural, and political impacts these conflicts had upon the indigenous communities within this region as well as the long-term implications. The research for this project draws on historical records, archaeological evidence, and anthropological studies. Sources include colonial accounts, tribal oral histories, and material artifacts. Findings indicate that inter-tribal conflict was often driven by competition for vital resources. With the introduction of European colonization, native warfare and weaponry began to change. The introduction of European weaponry and goods intensified inter-tribal conflicts as they struggled to gain an advantage in trade and war. Territorial disputes became more frequent, resources became scarce, and displacement became an issue. This project explores the evolution of weaponry and warfare among Indigenous tribes in Indiana, including the Miami, Potawatomi, and Ojibwe, highlighting the complex dynamics that shaped their experiences and lasting legacies.

Dr. Peter Sposato

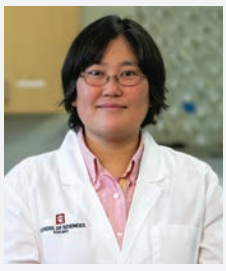
Dr. Sposato is program coordinator and associate professor of history at IU Kokomo. He is a social and cultural historian of late medieval and early Renaissance Italy, with a particular interest in the city of Florence and the region of Tuscany. He is the author of ***Forged in the Shadow of Mars: Chivalry and Violence in Late Medieval Florence*** *(Cornell University Press, 2022).*

CRISTIAN JUAREZ MORA
Senior, Biochemistry major, West Lafayette, IN

Nylon-11:

Reprocessing and Degradation

Nylon-11 is a synthetic polymer that is used in a variety of commercial products (e.g. interior of cars, carpets, and clothing). Because of its rigid structure, it is highly resistant to both abiotic and biotic degradation. Hence, once it is released into the environment, it remains as a contaminant for many years. In this study, the researchers explored 1) biological means to degrade nylon-11 for environmental remediation purposes and 2) conversion of nylon-11 into other useful forms to reduce nylon wastes destined to landfill. For the first goal, fungal species that appear to metabolically degrade nylon-11 polymers were isolated. Researchers also created a novel procedure to create a synthetic foam derived from nylon-11. The presentation will include analyzing the fungal species' ability to degrade nylon-11, as well as optimizing the synthesis procedure to achieve the desired physical properties of the re-purposed nylon-11 foam.



Dr. Hisako Masuda

Dr. Masuda is associate professor of biochemistry at IU Kokomo. Her research includes cellular physiology of bacteria and environmental microbiology. She utilizes many different approaches including molecular genetics, proteomics, biochemistry, and bioinformatics in her research. She received her Ph.D. in Microbiology and Molecular Genetics from Rutgers University. She is also a recipient of the Trustees Teaching Award.

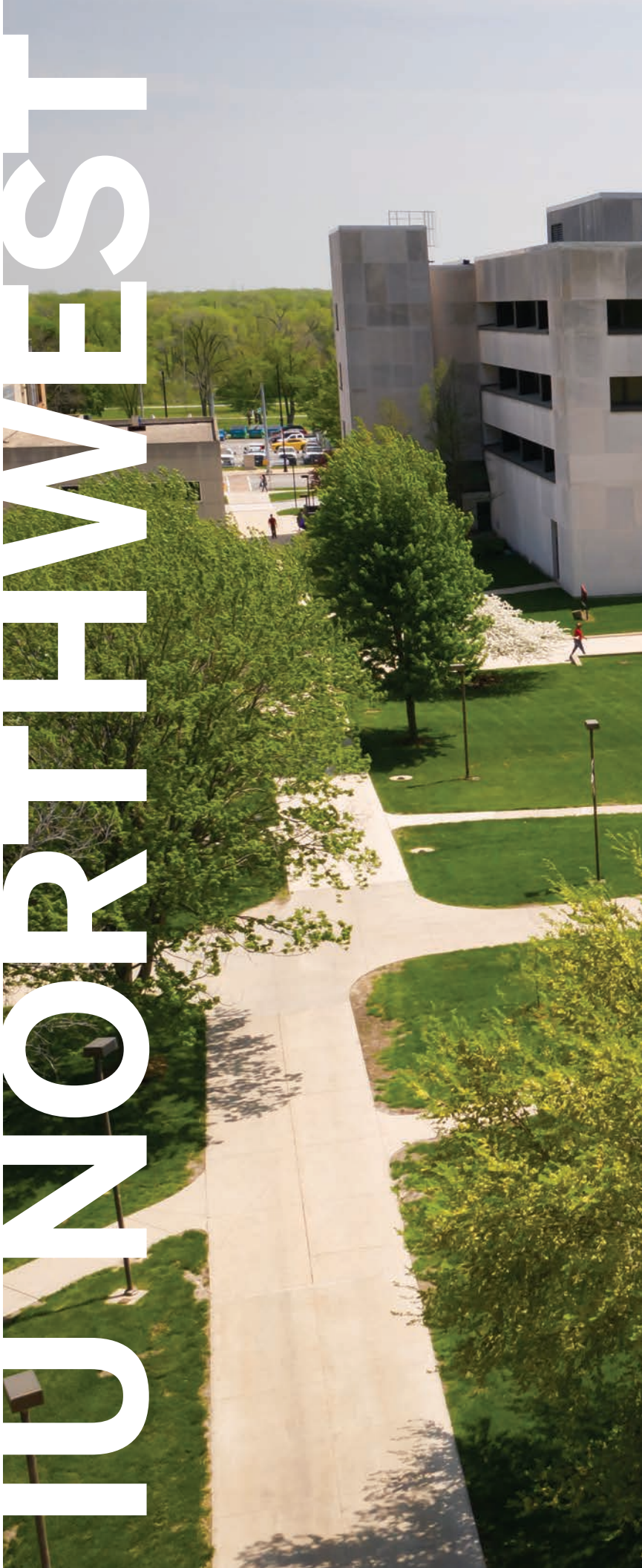
INDIANA UNIVERSITY
NORTHWEST

Indiana University Northwest is dedicated to improving the quality of life in the state's most diverse, urban, and industrialized region. Our mission is rooted in engaging with and partnering alongside our communities to support student success in the classroom and foster thriving communities. Through service, collaboration, and meaningful partnerships, we proudly celebrate the impact of our shared efforts.

Total economic impact:
$264.1M
ADDED INCOME

50%
OF FALL 2024 STUDENTS
are first-generation

80%
OF STUDENTS
receive financial aid



Vicki Román-Lagunas
Interim Chancellor,
Indiana University Northwest

"Here at IU Northwest, we are committed to enhancing the higher education experience of all our students. This, we believe, will serve them, their families, and our communities as they, too, become the leaders of our region, our state, our nation and our world."

First-Year Seminar Research Project:

Investigating the Effects of Ecological Management on the Indiana University Northwest campus

This project studied the effects of ecological management on biodiversity, which is the variety of life in a given area. Biodiversity is important because it supports ecosystem health, provides essential resources and benefits to people, and promotes ecosystem resilience. The researchers worked in small groups to measure and compare biodiversity in two natural areas on the IU Northwest campus. One site is actively managed by IU Northwest to support biodiversity through invasive species removal, native plantings, and prescribed burns. The other site is not managed. Each group measured plant richness and percent cover, insect and bird richness, and the cover of native vs. invasive species in 1m x 1m plots at each site. Richness values were calculated along with Shannon and Simpson's Diversity Index values to quantify and compare biodiversity between the two sites. The researchers also compared their group's data to the overall class data. The results indicated that diversity was generally higher at the managed site compared to the unmanaged sight. The managed site had more native species, whereas the unmanaged site had more invasive species. The results suggest that ecological management is an effective tool to promote biodiversity in urban areas like IU Northwest's campus.

ARTHUR GONZALEZ
Freshman, Biology major, Gary, IN

YOUSSEF HANNA
Freshman, Biology major, Dyer, IN

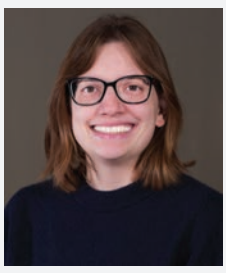
SAMUEL RUZGA
Sophomore, Geology major, Schererville, IN

DULCE MARTINEZ
Freshman, Psychology major, Calumet City, IL

COURTNEY PAPKA*
Sophomore, General Studies major, Chesterton, IN

HENRY SOTO
Junior, Biology major, Schererville, IN

*Not pictured



Dr. Savannah Bennett

Dr. Bennett has a Ph.D. in ecology, evolution, and behavior from Indiana University with a minor and certificate in college pedagogy. She is the director of IU Northwest's STEM Center and teaches first-year seminar in environmental science, senior seminar in environmental science, and evolution. She has extensive research experience in ecology and has several publications in this field.

ANDRES GARCIA
Senior, Geology major, Lake Station, IN

Sinkhole Morphology and Density

on the Mitchell Plateau in Southern Indiana

Sinkholes on the Mitchell Plateau in southern Indiana form in karst topography, where groundwater dissolves limestone, creating surface depressions. This project examines sinkhole morphology and its relationship to the limestone units of the Mitchell Plateau, hypothesizing that sinkhole density and size correlate with limestone purity. The Blue River Group, which is high in calcium carbonate (CaCO3) content, is expected to exhibit more sinkholes. Using 1-meter resolution digital elevation models (DEMs) and ArcGIS Pro, sinkhole dimensions and densities were analyzed. Limestone composition and CaCO3 concentrations were determined through XRF analysis. Measurements from seven 7.5-minute topographic maps — Paoli, Crandall, Mitchell, Corydon East, Laconia, Bedford, and Fredericksburg — were compared with ArcGIS data. The Mitchell Plateau consists of Blue River Group carbonates (St. Louis, St. Genevieve, Paoli), with Sanders Group carbonates (Ramp Creek, Harrodsburg, Salem). Average sinkhole dimensions were 87 m long, 62 m wide, and 4 m deep. Fredericksburg recorded the highest sinkhole density at 108 per km, while Mitchell had the lowest at 32 per km. Results indicate deeper sinkholes in northern areas dominated by Blue River Group carbonates. XRF analysis revealed St. Louis limestone had the highest CaCO3 concentration (93.55%), followed by Salem (91.70%) and St. Genevieve (91.37%).

Joe Blockland

Joe Blockland is a visiting lecturer for the geosciences department at IU Northwest. He earned a master's degree in geology from the University of Toledo. Blockland teaches geoscience and geographic information systems (GIS) at IU Northwest. He is experienced in various field/lab equipment such as coring devices, polarizing microscopes, particle size analyzers, and ground penetrating radar. He previously taught at Prairie State College and the University of Wisconsin and worked as a geologist for the North Dakota Geological Survey.

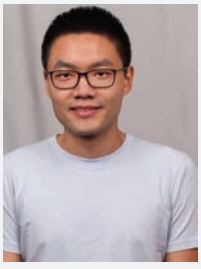
DIANA ARAIZA*
Sophomore, Biology major, Merrillville, IN

VICTOR RAMIREZ II
Freshman, Biology major, Michigan City, IN

*Not pictured

How Drinking Sweet Tea Affects the Fruit Fly

In today's society, everyone regularly consumes convenient, enjoyable food and drinks, but their impact on physical and mental performance is often unclear. For example, do sugary drinks affect cognitive and physical well-being long-term, even if marketed as healthier options? To explore this, the researchers conducted an experiment using Drosophila melanogaster, a common model organism that shares about 80% of its DNA with humans, to assess the effects of common beverages like sweet tea (Gold Peak) on cognitive function. The control group was fed a food/water mixture, while the experimental group received food mixed with sweet tea. Over four weeks, 20-30 flies were tested each week on their ability to climb a marked beaker, recording the number of flies reaching the 190 mL mark within a 2-minute window. Flies that failed to reach the mark or descended were counted as mortalities. Ten trials were conducted weekly, tracking cognitive performance over time. Results showed a decline in cognitive function, with the ascent rate dropping from 90% to 30%. Surprisingly, flies given sweet tea performed worse than those given other beverages like Zero Sugar Monster Energy drinks, challenging the perception of sweet tea as a healthier alternative.



Dr. Ming Gao

Dr. Gao is an associate professor of biology at IU Northwest, where he teaches introduction to biological sciences, molecular biology laboratory, genetics, human genetics, social implications of biology, intro to biological research, freshman seminar and individual study (faculty-led research). He has done extensive research in the field of germline development and has authored numerous publications in international journals with his undergraduate students. He completed his Ph.D. in Microbiology at Southern Illinois University Carbondale and postdoctoral training at Murray State University.

ALYNA SANTIAGO
Senior, Biology major, Crown Point, IN

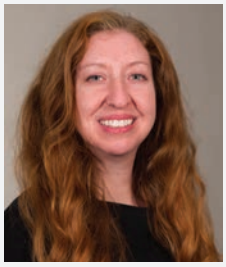
JAMIE SCHOETTLE
Senior, Biology major, Crown Point, IN

HALEY WEILAND
Senior, Biology major, Valparaiso, IN

Utilizing Northwest Indiana's Diverse Soil

for the Development of Potential Antibiotics

Antibiotic resistance is a pressing global health concern, so finding new antibiotics to combat the crisis is crucial. Soil is known to harbor diverse microbial communities, many of which produce antibiotics to compete within their environment. Since 2021, students at IU Northwest have worked with Tiny Earth Project to discover antibiotic producing bacteria from soil in and around northwest Indiana. Bacteria were isolated from soil samples using different growth media and analyzed for diversity. Individual colonies were picked and tested for potential antibiotic production. Isolated bacteria were screened for inhibitory effects against safe relatives of the ESKAPE pathogens, a group of highly resistant bacteria, such as methicillin-resistant Staphylococcus aureus (MRSA). Potential antibiotic compounds were extracted from bacteria that inhibited the growth of these organisms, and these purified extracts were tested. Cumulatively, >70 isolates from many types of soil have shown inhibitory behavior against ESKAPE safe relatives. The organisms were diverse in their antibacterial effects, but each inhibited at least one ESKAPE safe relative. The finding suggests that the diverse soils within Indiana may hold the potential for the discovery of new antibiotics that can contribute to the fight against pathogens that are antibiotic resistant.



Dr. Jenny C. Fisher

Dr. Fisher is an associate professor of biology at IU Northwest, where she teaches courses on allied health, environmental and medical microbiology, and a research experience in STEM. She also serves as associate editor for the ***Journal of Great Lakes Research****. Fisher's research focuses on environmental microbiology, specifically the impacts of urban and rural wastewater systems on aquatic resources. Recent work includes microbial source tracking of septic system effluent and antibiotic-resistant bacteria in Lake Michigan's beach sands and tributaries. She earned a Ph.D. in Marine Science at the University of Georgia.*

NOAH KAUFFMAN
Freshman, Computer Science major, Munster, IN

BRODY GORSKI
Freshman, Sociology major, Valparaiso, IN

TREVOR GOTTSCHALK*
Freshman, FineArts/Graphic Design major, Dyer, IN

*Not pictured

CERCLA, Poverty, and You

Pollution can harm anyone, but some locations are so severely contaminated that they pose a widespread risk to human health. These are known as Superfund Sites — areas so polluted that the government allocates significant resources to clean them up and make them safe for habitation. Intrigued by this issue, this project sought to answer the question: when a site in northwest Indiana becomes this polluted, who is most likely to be affected? To investigate, Superfund Sites in the region using the EPA's National Priorities List were identified. Next, individual site pages were reviewed to gather detailed information about each location. Finally, census data was analyzed for these areas to examine their demographic profiles. The study's initial hypothesis was that the populations most affected would primarily include individuals near or below the poverty line and communities of color. Surprisingly, the findings revealed that most Superfund Sites in northwest Indiana were located in majority-white areas with average income levels.

Dr. Kevin McElmurry

Dr. McElmurry is an associate dean for the College of Health and Human Services at IU Northwest. He has served as chair for the Department of Sociology and Anthropology. McElmurry's current research focuses on issues of environmental justice and resource distribution caused by the emergent consequences of climate change. He is an author and researcher with expertise in the sociology of religion, culture and the environment. He earned a Ph.D. in Sociology from the University of Missouri.


THE STUDENT
LABORATIVE
Room 130
BABE RUTH
1920
1934
NY
3

INDIANA UNIVERSITY
SOUTH BEND

Indiana University South Bend is the region's only comprehensive public university. At IU South Bend, students thrive through community engagement, gaining real-world experience through internships and research. Our graduates make a lasting impact as teachers, business leaders, health care professionals, and community advocates, driving progress and improving lives across the region.

Total economic impact:
$364.1M
ADDED INCOME

90%
OF GRADUATES
in health professions
stay in the region

70%
OF STUDENTS
receive financial aid

Andy Williams
Interim Deputy Chancellor, Indiana University South Bend

"The combination of an accessible campus environment, distinguished professors, and an affordable price allows IU South Bend to play a vital role in our community. Students are able to earn their valuable IU degree right where they live and work. We take pride in the fact that more than two-thirds of our graduates stay connected to our community, providing a skilled and in-demand workforce to area employers."

ARRAM ALMANASEER
Senior, Criminal Justice major, Elkhart, IN

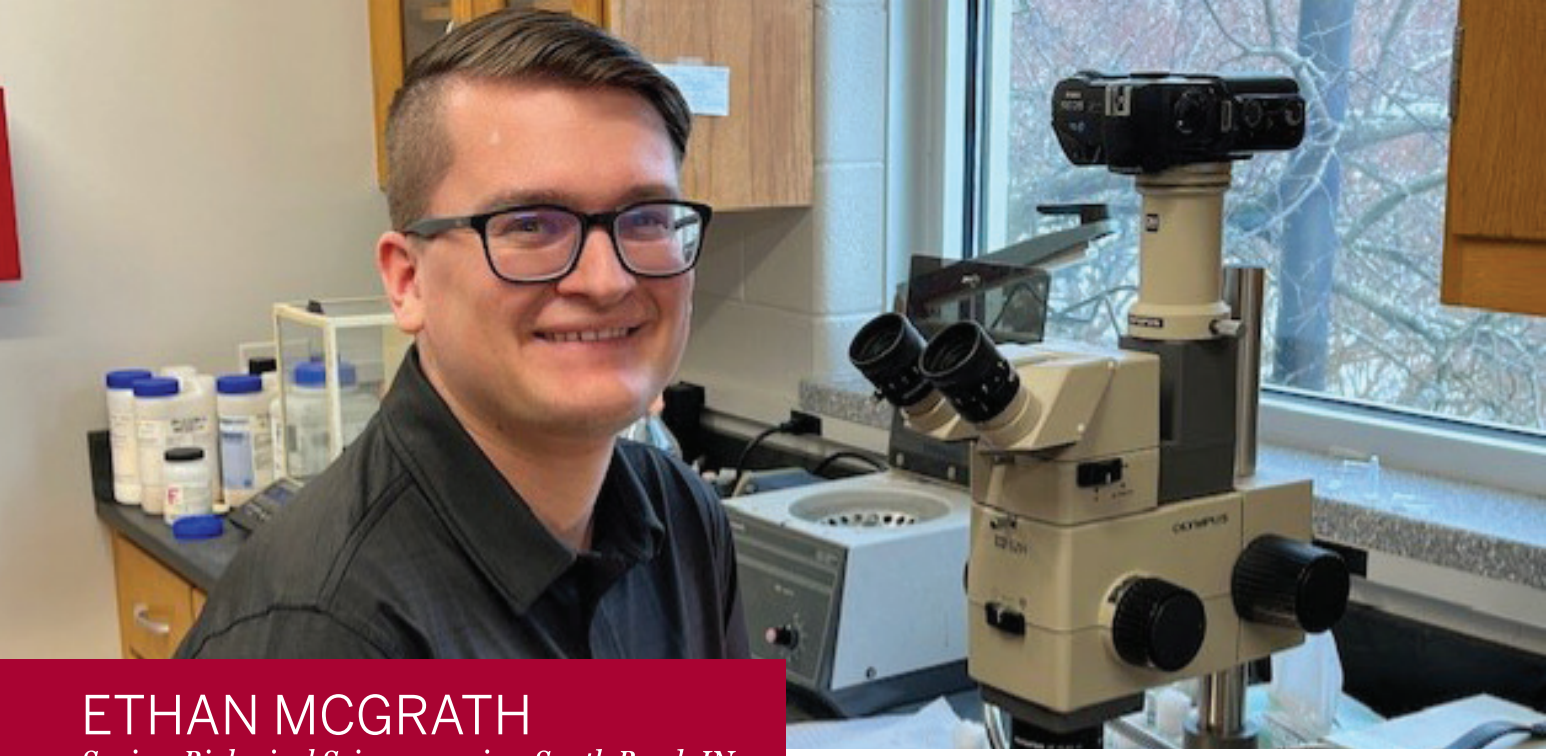
Media Myopia:

A Directed Qualitative Content Analysis of Hate Crimes Represented by Hollywood

Most Americans (75%) receive crime information from media including fictional crime dramas and newspaper articles (Pew Research Center, 2024), and the motivations portrayed are not accurately presented. Inaccuracy can increase fear of victimization while simultaneously creating misinformation. Although hate/bias crimes in Indiana stayed consistent from 2012-2016, an increase was reported across all counties from 2016-2022 (69 in 2016 to 328 in 2022) (Indiana State Police, 2012-2022). A directed qualitative content analysis with two separate data was employed to examine depictions of hate crime motivations utilizing McDevitt et al.'s (2002) four motivations of hate crime and the social construction in the media. AP news articles (2016-2024, data coding 1) and fictional crime TV shows (2001-2024, data coding 2) were analyzed for accuracy of hate crime motivation compared to the research and statistics from McDevitt et al. (2002), Indiana, and the Federal Bureau of Investigations (FBI). The study found media portrayals of hate crimes provided either no motivation (largely found in newspaper articles) or the most extreme motivation (found in both newspapers and fictional crime shows), thus further perpetuating myths and misinformation about hate crime motivations. Further research and policy implications will be addressed.

Dr. Stacie Merken

Dr. Merken is department chair and associate professor of criminal justice and a senior mosaic faculty fellow at IU South Bend. As a criminologist, victimologist, and generalist in her field, she engages in multiple research areas. Her work has been published in various mediums and she has an edited book on criminology and horror films. She has been interviewed nationally and internationally regarding serial killers, murderers, correctional issues, and gun violence.



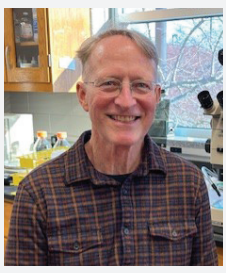
ETHAN MCGRATH

Senior, Biological Sciences major, South Bend, IN

Improving Hoosier Health

by Exploring the Role of the Alsin2 Gene in Lou Gehrig's Disease

Indiana University is investing over $250 million to advance scientific research focused on curing and treating diseases and enhancing human health. IU President Pamela Whitten highlighted the commitment, stating that these significant investments in the biosciences will position IU as a leader in groundbreaking discoveries while strengthening the health care and life sciences ecosystem throughout Indiana. This research project involves trying to determine the role of the Alsin2 gene in causing Amyotrophic Lateral Sclerosis (ALS), also known as Lou Gehrig's disease. According to The Indiana University ALS Center at IU Health in Indianapolis, ALS is a progressive degenerative condition that affects the nerve cells in the brain and spinal cord. ALS primarily impacts physical muscle control but not cognitive ability. It is always fatal and currently has no cure. The human Alsin2 gene is present in several animal models, enabling scientists to study it in animals. This gene encodes a protein with various functions. DNA constructs of different segments of the Alsin2 gene were created to explore the role of each region. Genetic experiments are being conducted to insert these constructs into fruit flies for analysis of their function.



Dr. Kirk Mecklenburg

Dr. Mecklenburg serves as professor of biology at IU South Bend. His lab is actively investigating the function of genes expressed in the nervous system. They use the fruit fly as a model system for analyzing the function of genes that cause disease in humans. His lab studies Alsin2. Mutations in this gene are known to cause Amyotrophic Lateral Sclerosis (ALS), also known as Lou Gehrig's disease. This is a fatal, muscle wasting disease that is currently incurable.

ALEXANDRA HERR
Senior, Nursing major, Goshen, IN

What Pain Intervention Methods Help Reduce Opioid Use and Increase Patient Satisfaction?

Pain management is crucial for patient outcomes post-surgery. Nurses quickly learn that pain hinders healing, affects mental health, and triggers stress-related physiological symptoms. Nurses implement pain management orders and ensure patient comfort, requiring knowledge of reducing opioid use and exploring alternative options. This premise encouraged the comparison of pain interventions used to reduce the pain of shoulder surgery and their relation to opioid use. The PICO statement applied to this systematic review of current evidence-based practice is the pain management outcome of nerve block agents as compared with opioids on both pain levels & opioid usage. After compiling five peer-reviewed articles, the results showed that pain management interventions are best when applied in tandem. Some interventions without opioids showed more success than others. Most of the standard of care interventions by nurses is medication education. Although this study focuses on shoulder surgery, the information is valuable for all nurses as pain management can be implemented with a multimodal plan of care based on prioritizing patient preferences and sparing the use of opioids.

Kip Borkholder

Kip Borkholder is a clinical assistant professor of mental health nursing in the Dwyer School of Health Sciences at IU South Bend. Borkholder is an IU South Bend nursing graduate and earned his M.S. in Nursing at IU Indianapolis before becoming board certified as a psychiatric mental health nurse practitioner. His academic interests include anti-social behavior, substance abuse, and evidence-based practice. He is most passionate about helping students learn how to evaluate information and rigorously pursue the truth with logic, evidence, and rationality.

LILLIAN MAGERS-PERSHING

Junior, English major, South Bend, IN

Ancestry of Selves

What role does the legacy of our ancestry play in the identity we create? In a deeply intimate collection of personal essays, written over the course of a semester, Lillian Magers-Pershing seeks to find an answer to this question by navigating the entwining aspects of the idea of self and family. The essays were compiled as a final project and became the book, Ancestry of Selves, which traverses through Magers-Pershing's memory and experiences with her grandmothers to explore the complications and beauty of mental health, racial identity, grief, and her place in the world. The author is a descendant of generations of Hoosier women, and her roots and identity are intrinsically tied to Indiana as evident by the expressions of connection, the heavily featured landscape of Indiana, and the idea of home represented in many of the essays. In one essay, the author explores her biracial identity through the recollection of childhood memories surrounding her African American grandmother and the historic evolution of categorizing biracial identity. Every aspect of the book is an expression of the author's identity, from the essays to the interior and exterior design.

Dr. Kelcey Ervick

Dr. Ervick is author of four award-winning books, including ***The Keeper****, a graphic memoir about girls' sports in the early years of Title IX, which won a 2023 Ohioana Book Award and was featured in the* ***New York Times Book Review's*** *Holiday Gift Guide. She has received grants from the Indiana Arts Commission, the Sustainable Arts Foundation, and IU's New Frontiers in Arts and Humanities. As professor of English and director of the Pub Hub at IU South Bend, her aim is to provide training for careers in editing and publishing.*

CAIN THURSTON
Senior, History major, South Bend, IN

Play So You Can Work:

The Role of Playland Park in South Bend, Indiana's Economic, Cultural, and Community Development, 1882-1961

South Bend's growth is largely attributed to the steel and auto industries, but the role of leisure parks, such as Springbrook Park and Playland Park, is often overlooked. These parks, located in the southeastern district, significantly contributed to the city's economy, culture, and development. However, their impact remains largely undocumented in the historical record. This project serves to fill the gap in historiography through reconstruction and analysis of South Bend Tribune newspaper articles, interviews from former park-goers, and examination of artifacts still cared for by those connected to the park's history compared alongside accounts of other parks in Midwestern and Rust Belt cities. South Bend's unique geography and the parks' strategic location, along with community-focused events, spurred investments in light-rail, riverboat transportation, tourism, and population growth, leading to the development of the River Park neighborhood. Today, IU South Bend's campus and River Crossing Housing stand on the same land once occupied by these parks, whose legacy continues to shape the community.

Dr. Hayley Froysland

Dr. Froysland is an associate professor of history with a specialty in Latin American history and the director of the general studies degree program at IU South Bend. After receiving her B.A. from Hope College and M.A. in Latin American Studies from the University of Florida, she completed her doctorate in history at the University of Virginia. Dr. Froysland was the recipient of a Trustees' Teaching Award in 2010, 2013, 2016, 2020 and 2024. She received the College of Liberal Arts and Sciences Outstanding Faculty Advisor Award in 2008 and 2021.

RESEARCH WITH **REAL IMPACT**

IU Regional Campus Undergraduates

INDIANA UNIVERSITY
SOUTHEAST

Indiana University Southeast actively partners with nonprofit organizations, government agencies, and businesses to prepare the future workforce and strengthen the communities we serve. Through outreach, tailored research, and implementation plans, we promote engagement that fosters lifelong learning and builds stronger connections within the community.

Total economic impact:
$219.9M
ADDED INCOME

99%
OF GRADUATES
are employed or attending graduate school

89.5%
OF ALUMNI
expect higher future earnings than their childhood household

Debbie Ford
Chancellor, Indiana University Southeast

“By investing in our students’ success, IU Southeast is a driving force in this region’s educational, social, and economic landscape. Together, we’re fostering a legacy of leaders and first-generation college graduates who are making a difference right here at home.”

KELSEA RICHMER
Senior, Biology major, Sellersburg, IN

The Effect of Specific Mutations

on Chemotherapy Resistance in Lung Cancer

According to the American Lung Association, Indiana has one of the highest incident rates of lung cancer in the United States, underscoring the need for new treatments for lung cancer patients. The production of new therapeutics has been slowed by the lack of model systems to study relevant genetic mutations that lead to tumor growth, poor prognosis, and low five-year survival rate. The goal of the current research is to develop a library of mutant cell lines that can be used to develop and screen potential new forms of gene therapy for lung cancer patients. Lung tumors typically contain many different mutations that each contribute differently to drug resistance and disease progression. Via genetic engineering, individual mutations were introduced into cells that could be grown in a controlled laboratory environment. Using this system, the role of each mutation with respect to resistance to standard-of-care chemotherapeutics, such as paclitaxel and cisplatin, was analyzed. Specific mutations had different contributions to resistance and growth rate of engineered cancer cells. Identification of correlations between specific mutations and resistance to specific drugs can contribute to improved regimens and more personalized cancer treatment.

Dr. Margaret Wallen

Dr. Margaret Wallen is an assistant professor of biology at IU Southeast. Throughout her career, Dr. Wallen has genetically modified organisms, including bacterial, fungal, and animal, to study complex characteristics. Current research involves genetically engineering human lung cancer cells to explore resistance to standard-of-care chemotherapeutics and develop new personalized treatments for lung cancer patients. The goal is bridging the gap between models available for early drug investigation and genetic features of patient tumors, leading to new generations of cancer therapeutics, ultimately improving prognosis for lung cancer patients.

JOEL WRIGHT

Sophomore, Neuroscience major, Jeffersonville, IN

Everyone is Worth Saving:

Addressing the First Responder Mental Health Crisis

Indiana's EMS workforce faced a 7% decline from 2018 to 2021, losing 1,300 workers despite a national 5% projected growth (U.S. Bureau of Labor Statistics, 2023). This has exacerbated mental health concerns like burnout, depression, anxiety, and posttraumatic stress, reducing care quality, staff retention, and capacity to handle already high call volumes, creating a destructive cycle. Focusing on southern Indiana, this study aims to explore the EMS provider crisis and strategies to address it. Using a mixed-methods approach, the researchers examined the challenges, mental health needs, and motivations of EMS workers. Preliminary findings reveal widespread negative impacts on mental health and social functioning, with limited professional support. Systemic barriers, including low pay, morale, and staffing, compounded by difficult schedules and limited advancement opportunities, worsen wellbeing. While EMS work offers inspiring moments, they fail to outweigh the 139% increased suicide risk compared to the general population (CDC, 2021). This study underscores the urgent need for integrated professional support in EMS departments to enhance worker wellbeing, retention, and community health.

Dr. Ashley Burks-Wright

Dr. Ashley Burks-Wright is an assistant professor in the clinical mental health counseling program at IU Southeast and a licensed mental health counselor. With extensive experience in diverse communities and integrated care settings, Dr. Burks-Wright specializes in sex therapy and advocates for improved mental health support for first responders. Her research focuses on sex positivity, counselor education, and culturally responsive care. Dr. Burks-Wright is dedicated to creating positive change and preparing skilled counselors for the future.

MASON HARDER
Junior, Biology major, Loogootee, IN
COLE WALKER
Senior, Biology major, Haubstadt, IN

Isolation and Characterization of Bioplastic Degrading Bacteria

from Indiana Soils and Waterways

Poly-hydroxybutyrate (PHB) is a bioplastic commonly found in medical, pharmaceutical, and consumer-based products. Certain types of bacteria degrade this bioplastic and use it as a carbon source for growth, making them crucial players in local environments where plastic waste accumulates. Our investigation focuses on isolating and characterizing bioplastic degrading bacteria from Indiana specific locations such as IU Southeast soils and pond water, Ohio River sediments, and plastic-enriched soil from Gibson County, Indiana. To date, 27 bioplastic degrading bacteria have been isolated. Using molecular characterization, isolates from the genera *Streptomyces, Bacillus, Priestia* and *Rossellomorea* were identified. Future work will focus on enzyme assays designed to identify the best bioplastic degraders and use molecular tools to better understand the degradation pathways in these isolates. The results of this study may present Indiana with opportunities to manage plastic waste produced by biomedical, pharmaceutical and food packaging industries.

Dr. David Treves

Dr. Treves is currently a professor of biology at IU Southeast. He earned his Ph.D. at the University of Michigan in 1998 and conducted postdoctoral work from 1998-2001 at the Michigan State University Center for Microbial Ecology. His research focuses on microbial degradation of bioplastics, microbial diversity in saline environments, and antimicrobial resistance in urban waterways.

HANNA MUDD
Senior, History major, Elizabeth, IN

KELSIE JACOB
Senior, Sustainability & Regeneration major, Birdseye, IN

HANNAH SCOTT
Senior, Sociology major, Jasper, IN

How a University-Based Center

Empowers Undergraduate Students through Project-Based Learning

Project-based learning at the Applied Research and Education Center (AREC) at IU Southeast builds employable and relevant skillsets through collaboration on issue-driven evaluation and consulting work for local client organizations. Undergraduate research assistants gain valuable insights on key social issues affecting the university's eleven-county service region. Local issues drive projects at AREC which include community-needs assessments, applied local research, evaluation of federal and state grants, and community-based research of discovery. Stakeholders include non-profit organizations, local government, and the business and economic development communities. Community efforts use student-produced work to inform strategic action plans, apply for grants, and influence policy change. Students are involved in every level of project execution, from ideation and research design to data collection, management, analysis, interpretation, and visualization for federal and public-facing reports and presentations. Skillsets developed from project-learning include public data acquisition, creation and utilization of datasets, and usage of interfaces that include NVivo, Qualtrics, SPSS, GIS, and Excel. Work experience at AREC provides students with the unique opportunity to build skills and network with local community partners. Learning at AREC goes beyond the classroom experience in empowering students to use sociological and interdisciplinary perspectives to grow personally and professionally.

Dr. Melissa Fry

Dr. Fry is director of the Applied Research and Education Center (AREC) and professor of sociology. At the AREC, Dr. Fry and a team of undergraduate research assistants engage community-based research, needs assessment, and evaluation including work in early care and education, P12 education, youth development, housing, health, mental health, and substance use disorder, and community and economic development. She is committed to providing solid research to design, evaluate, and learn from interventions to address our most pressing challenges and build thriving communities.

KARA WRIGHT
Senior, History major, Corydon, IN

Important Vows:

Advocating for the Child Marriage Prevention Act of 2024

At just 11 years old, Sherry Johnson was married to her 20-year-old rapist. This is not a foreign case found in legal history books. This is a 1971 case from the Pinellas County court in Florida. "They forced me to marry him to cover up the scandal, instead of putting the handcuffs on him and sending him to prison, they put the handcuffs on me and imprisoned me in a marriage" (Zee 1). According to the 2022 Brown Political Review, over 50% of Americans believe that child marriage is illegal in their country. However, it is something that has happened and continues to occur in America. This research project seeks to share information on child marriage: its roots, its place in America, and its effects. Taking the stance that child marriage should be made illegal, this project presents the roadblocks that make this undertaking so difficult. Utilizing scholarly journals and law reviews, this presentation explores how America's domestic laws support a practice that the country has denounced on the international stage. In addition, a survey was utilized to better understand how Indiana residents perceive the topic of child marriage in their state.

Dr. Rebekah Dement

Dr. Dement is the honors program director and a lecturer of English at IU Southeast. She earned her B.A. from IU Southeast, and she earned her M.A. and Ph.D. from the University of Louisville. Her doctoral research focused on southern literature and history, but her academic interests and course topics range from Shakespeare to Civil Rights. She teaches foundational and advanced courses in face-to-face and online environments, and she has experience with assessment, curriculum development, and project management.

BUILDING FOR THE **FUTURE**

rcoe.iu.edu

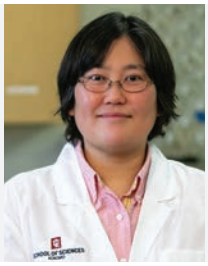
HONORABLE MENTIONS

DALEN BUSHONG

Junior, Biochemistry major, Wabash, IN (IU Kokomo)

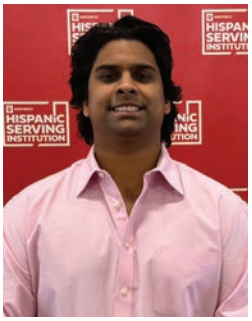
Biodegradation of Nylon-11 by Bacterial Strains and Characterization of their Putative Depolymerization Enzymes

Nylon-11 is a synthetic plastic widely used in commercial products such as tubing for automobiles, offshore oil fields, and medical devices. The biodegradation of bundled nylon polymers has been considered impossible due to their crystalline structures and poses as an ecological threat. We describe how our lab attempted to reduce the structure of nylon via physiochemical treatments; and discovered a methodology to convert large nylon fragments into smaller, amorphous structures. Bacterial strains that utilize nylon-11 as a sole source of carbon and nitrogen were isolated; and enzymes were identified via transcriptomic study. Using recombinant method, candidate genes were cloned for purification and subsequent activity analysis.



Dr. Hisako Masuda

Dr. Masuda is associate professor of biochemistry at IU Kokomo. Her research includes cellular physiology of bacteria and environmental microbiology. She utilizes many different approaches including molecular genetics, proteomics, biochemistry, and bioinformatics in her research. She received her Ph.D. in Microbiology and Molecular Genetics from Rutgers University. She is also a recipient of the Trustees Teaching Award.



JOSEPH ARULANDU

Senior, Psychology major, Valparaiso, IN (IU Northwest)

How Rating Inattention of a Warning and Summarization of a Warning Impact False Memories

When presented with a list of similar words, people will confidently and vividly recognize words not on the list but related to the list. This false recognition indicates the creation of false memory. This study investigated the effectiveness of a warning at reducing false memories by monitoring inattention and summarization techniques. Participants completed a list-learning false-memory task. Some of these participants were warned. Of those who were warned, some rated inattention and some summarized the warning. Those who rated inattention as low were more likely to reduce false recognition when warned. This finding suggests that inattention may contribute to false memory. However, those who wrote detailed summaries of the warning, were more likely to increase false recognition. This finding suggests that understanding the false recognition effect does not decrease false memories.

Dr. Frances Daniel

Dr. Daniel is associate professor of psychology at IU Northwest. She received her Ph.D. in Psychology from the University of Illinois Chicago. Her research interests include memory and language, focusing on bilingual activation, proactive interference in text comprehension, and susceptibility to false memories.

ADAM BOWLBY

Senior, History major, Goshen, IN (IU South Bend)

The Mobilization of Purdue University during World War I

At the end of WWI, the U.S. government established a program to train college students for specialized military roles. As members of the Student Army Training Corps (SATC), male students in roughly 600 colleges participated in military training alongside their studies. By examining Purdue's SATC detachment and program's publicity in Indiana, insight was gained about participants in SATC. Three main factors motivated young men to join: a belief in soldiering as a form of self-improvement, effective propaganda which instilled a sense of patriotism, and opportunities for college education (including military officer advancement) during a time when college was still for the elite.

Dr. Jonathan Nashel

Dr. Nashel is professor of history at IU South Bend. He received his Ph.D. in American History from Rutgers University. He teaches 20th-century American history, the Cold War, and film history. Author of ***Edward Lansdale's Cold War****, he has published on the Vietnam War and the CIA.*

C.J. JOHNSTON

Senior, Neuroscience/Biology major, Salem, IN (IU Southeast)

The Gravity of Population Size on Attitudes Towards Consent

Individuals in rural areas disproportionately experience intimate partner violence and sexual abuse compared to people in more densely populated areas. Understanding how individuals perceive consent can predict the likelihood of both perpetration and victimization. While domestic violence, particularly in urban areas, has been well-studied, research has not examined differences in attitudes regarding consent across people from cities of varying population density. This study examines rural/urban/suburban differences in attitudes about consent. Results indicated that perceived larger hometown population size was associated with greater acceptance of sexual consent, even though actual hometown population size was not correlated with attitudes towards consent.

Dr. Meghan Kahn

Dr. Kahn is associate professor of psychology and neuroscience and dean of the School of Social Sciences at IU Southeast. She studies learning and memory across species and its applications in education. Her expertise includes behavioral neuroscience, comparative cognition, and avian behavior. She received her Ph.D. in Psychology.

INDIANA UNIVERSITY

OFFICE OF THE VICE PRESIDENT
FOR REGIONAL CAMPUSES AND ONLINE EDUCATION

Bryan Hall 104
107 S Indiana Ave
Bloomington, IN 47405

rcoe.iu.edu