COLLEGE OF HEALTH AND HUMAN SCIENCES

- Health and Kinesiology
- Psychological Sciences
- Health Sciences
- Nutrition Science
- Nursing
- Consumer Science
- Human Development and Family Studies
- Speech, Language, and Hearing Sciences
- Hospitality and Tourism Management
COLLABORATION

When solving hard problems, many minds are better than one. This approach makes Purdue’s College of Health and Human Sciences a place primed for discovery and innovation. Our vision is to connect health and human scientists from across disciplines to address some of life’s grand challenges: autism, psychological disorders, Parkinson’s disease and age-related conditions — to name a few.

Today, over 200 HHS faculty are asking hard questions, pushing boundaries and collaborating to explore seven strategic research themes that have direct potential for making lives better. We invite you to read about our ongoing explorations.

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LIFE SPAN DEVELOPMENT

Research examines issues related to human health and well-being across the life span, and in contexts such as school and family. Work focuses on biological, physical, cognitive and psychosocial development during a number of critical periods including prenatal, infancy, early childhood, adolescence and adulthood.

THE BUILDING BLOCKS OF PLAY

With decades of experience helping children realize their full educational potential, Jim Elicker knows that high-quality learning settings can detour children from a “predetermined course” associated with the cycle of poverty. Elicker, professor of HUMAN DEVELOPMENT AND FAMILY STUDIES, is evaluating the effectiveness of Indiana’s quality rating and improvement system for early education child care programs in Indiana.

Elicker’s research can be characterized by the discovery of optimal experiences that lead to success. “The brain grows and organizes itself based on what the child is doing, so early experience is really important,” he says.

In one award-winning study, he and graduate student Zachary Gold observed that children gain confidence with building toys, such as blocks. “If you look at block-building as engineering, you can see how it relates to early learning skills in math, social and physical skills,” Elicker says.
HOW EARLY HEALTH AND NUTRITION AFFECTS FUTURE HEALTH

Michele Forman, distinguished professor and head of the Department of Nutrition Science, examines the developmental origins of disease.

She focuses on nutritional epidemiology and clinical nutrition research with an emphasis on early life exposures and risk for chronic disease — as well as the role of nutrition in growth and health across the life span. In one study, Forman examined the complex effects of maternal pre-eclampsia on a child's pubertal and nutritional development.

Work in her laboratory addresses nutritional assessment of individuals from infancy through adulthood. For instance, she has investigated the epigenetic alterations from diet in pregnancy and infancy on the health of the offspring. “This project has helped us understand how prenatal and folate supplements influence obesity,” Forman says. The work also showed that breastfeeding can modify epigenetic alterations.

Another area of focus tests dietary interventions among high-risk groups such as chronic renal disease patients.

UNTANGLING FACTORS AFFECTING AT-RISK PREGNANCIES

Her interest piqued by a high-risk pregnancy of her own, researcher Valerie Knopik began exploring how the prenatal environment, combined with genetics, might affect child outcomes. In her work as a behavioral geneticist, she investigates the consequences of substance abuse during pregnancy. Knopik is the Ben and Maxine Miller Professor of Human Development and Family Studies.

Thanks to Knopik’s long-term, multisite effort, we are closer to disentangling genetic and environmental factors that might affect a child’s predisposition to ADHD and associated learning deficits, such as reading and language.

“My working hypothesis is that chemical exposure affects genetic expression, but we need to better determine what is shared genetically and what is caused by environmental factors,” she says.

By addressing both genetic and environmental factors, Knopik’s work could provide OB-GYNs with the evidence they need for referring patients to preventative and interventional family-based treatments, such as therapy and counseling.
ADVERSE EFFECTS OF COMMERCIAL CHEMICALS

Currently, more than 80,000 chemicals are being used commercially in the United States, and most of them have not been assessed for toxicity.

Jennifer Freeman, associate professor of toxicology in HEALTH SCIENCES, believes toxicity profiles are essential for understanding the health risks of these chemicals. During developmental periods, exposure to certain chemicals can influence the onset of adult disease, disorders and dysfunction.

In her lab, Freeman studies zebrafish to define the adverse impacts of a developmental chemical exposure throughout the life span — as well as in subsequent generations — by linking genetic, epigenetic, phenotypic and behavioral assessments.

“Genes associated with disease are 80 percent similar between the zebrafish and humans,” she says, “which allows for translation of genetic and epigenetic mechanisms of toxicity.”

Freeman investigates developmental origins of adult disease pathogenesis with a specific focus on neurological disorders, reproductive dysfunction and cancer.

HARD TO SWALLOW

Swallowing is an important and complex biological function. Georgia Malandraki, assistant professor in SPEECH, LANGUAGE, AND HEARING SCIENCES, explores how the brain and muscles control swallowing. She is focused on developing interventions for swallowing disorders, known as dysphagia.

Until recently, swallowing was believed to be a reflex that did not involve the brain. “So, if a stroke patient lost the ability to swallow, we thought it would be difficult for them to regain it. This news was devastating for our patients,” Malandraki says. Recent neurophysiology studies, including work from her laboratory, has shown that swallowing is a complex process that depends on more than 40 pairs of muscles, several nerves — and the brain.
Based on the findings, Malandraki began designing behavioral interventions for dysphagia. To accelerate dissemination of her techniques, she teamed with assistant professor Chi Hwan Lee from the School of Biomedical Engineering to develop wearable devices that can remotely monitor swallowing and treatment.

**THE SKINNY ON BARIATRIC SURGERY**

Bariatric surgery has become a popular weight-loss option, with over 2 million patients currently affected and more than 200,000 more surgeries performed in the U.S. each year. Nana Gletsu-Miller, associate professor in **NUTRITION SCIENCE**, studies the impact of weight-loss surgery on overall health. Bariatric surgery is a great tool to help people who are severely obese lose weight, and surgery reduces obesity-related health problems such as diabetes and heart disease. However, bariatric surgery patients are prone to nutritional deficiencies, especially iron, vitamin D, some B vitamins, calcium, zinc and copper.

If a bariatric surgery patient experiences fatigue, anemia, hair loss, loss of muscle and bone, and neurological problems, malnutrition could be the cause. “Bariatric patients develop nutritional problems we haven’t seen in this country in decades,” Miller says. “Our research on this population can be applied to other populations at risk, since poor nutrition occurs in many parts of the world.”

Gletsu-Miller is helping post-surgical patients maintain their weight loss, encouraging better nutritional health.
PROMOTION OF HEALTH AND WELLNESS

Research explores the biological, psychological, behavioral, social, environmental and policy factors that promote health and wellness. Studies are conducted at the individual, health system and population levels.

THE MECHANICS OF GOOD BALANCE

Falls are the leading cause of accidental death among the elderly and the third-leading accidental killer among all age groups. For Shirley Rietdyk, professor in HEALTH AND KINESIOLOGY, falls are the focus of her research. She studies the interaction of neural, muscular and mechanical systems in mobility, posture and balance.

Up to 53 percent of falls are caused by tripping, Rietdyk explains. “Why people fail to step over an obstacle they knew was there is largely unknown. Understanding this failure and developing therapies to prevent it will be instrumental in decreasing the likelihood of falls.”

Rietdyk’s team has developed a methodology to assess this type of failure. The work will enable researchers to more fully understand proactive control of adaptive gait — which will lead to the development of interventions to prevent trips.

In Purdue’s Biomechanics Laboratory, Rietdyk and her research team look for clues as to how the nervous system incorporates visual and sensory information to coordinate muscle activity for safe, balanced movement. Their goals are to identify key factors that lead to falls and to develop interventions that would prevent fall-related injuries.

IMPROVING THE QUALITY OF NURSING HOMES

According to the Centers for Medicare and Medicaid Services, 70 percent of people over age 65 will need long-term care services, and more than 40 percent will require the around-the-clock care a nursing home provides.

“The quality of nursing home care is a persistent concern,” says Kathleen Abrahamson, associate professor of NURSING. “Nursing home residents are arguably the most complex of all patient populations as they tend to have chronic health conditions, cognitive impairment and functional loss, making their care exceedingly challenging.”

Abrahamson’s research is focused on improving the experience of older adults in long-term care. She has worked on projects that have influenced Medicaid policy in Minnesota, and her findings provide evidence used to improve long-term care delivery systems across the country.

Her studies suggest that pay-for-performance projects not only help organizations build their capacity for quality improvement, but the value of these projects extends beyond the targeted area of improvement.

In one of her projects, Abrahamson’s team found the level of a resident’s cognitive impairment was negatively related to quality of life.

“Our results highlighted the need to ensure adequate levels of paraprofessional direct-care staff and the availability of dementia-focused special care units,” she says.

Currently, Abrahamson is working closely with academic researchers, practitioners and policy makers in Indiana to improve the lives of nursing home residents in the state.
PERSONALITY PREDICTORS

No two people are alike, and our individual differences not only make us unique but also can help explain and predict behavior. It’s those differences in personality and how they contribute to antisocial behavior and substance use that interest Don Lynam, distinguished professor of PSYCHOLOGICAL SCIENCES. His research explores which personality traits are most important to specific outcomes, how early in development these traits become important, and the processes by which these traits have their effects on behavior.

“If we know which traits place individuals at risk, then we can develop more specific interventions aimed at those traits,” Lynam says, “and ultimately target interventions to the individuals most in need of them.”

His findings show that sensation-seeking may be key in predicting experimentation with drugs but not for predicting regular to heavy drug use or antisocial behavior. However, interpersonal antagonism seems to be an important predictor of heavier drug use and also of antisocial behavior.
MARRIAGE, MENTAL HEALTH AND WELL-BEING

“Nearly 75 percent of people in the U.S. will get married at some point, and when you add in cohabiting couples it’s clear that almost everyone will be in a long-term intimate relationship,” says Susan South, associate professor of Psychological Sciences. “And the quality of that relationship can affect physical and mental health.”

South’s research involves twin studies. Studies that compare differences between identical and fraternal twin siblings enable researchers to quantify the relative influence of genetics and the environment on outcomes like health and well-being. Through her investigations, South has determined that when people are genetically predisposed for mental illness, such as depression or anxiety, stress in the marriage can be a trigger for the illness to manifest.

It is a little like the chicken or the egg question, she says. Individuals come into a marriage with their own issues. It’s hard to assess if these issues cause marital stress, or if marital stress causes the mental health issues.

“We found that genetic influences on the variation in self-reported health were greatest at both high and low levels of marital satisfaction, suggesting that both really good marriages and really bad marriages can change how genetic influences on health are expressed,” she says.

South’s goal is to determine the “why” with all of this. “We’re asking: what is it about personality and mental illness that disrupts a marital relationship,” she says. Continuing to probe this issue could have implications for counseling methods that take into greater account individual personality traits and influences on mental illness.
BACKGROUND NOISE AFFECTS HEARING LOSS

In varying degrees, 36 million American adults suffer hearing loss. Michael Heinz, professor of SPEECH, LANGUAGE, AND HEARING SCIENCES with a joint appointment in Biomedical Engineering, explores hearing loss and hearing improvements.

Heinz and his team have found that background noise — sounds typically heard in a crowded room, for example — causes the ears of those with hearing impairments to work differently.

In studies with chinchillas, which have a hearing range similar to humans, Heinz’s work confirmed that a major physiological effect from hearing loss is that the auditory nerve fibers are particularly distracted by background noise.

“This has implications for research and clinical settings,” Heinz says. “For example, most audiology testing takes place in a quiet environment. But testing with noisy, more realistic backgrounds is necessary to truly understand how the ear is processing sound.”

The findings could influence the design of hearing aids and other assistive technologies.

NEUROSCIENCE

Interdisciplinary neuroscience research focuses on how biological systems give rise to emotion, perception, behavior, language and thought. Research examines how the brain and nervous system develop and function in healthy individuals, as well as the contribution to psychological and neurological disorders.

TRANSLATING THE CONVERSATION

Surprisingly little is known about the nerve circuits that the brain uses to monitor and control the stomach and the rest of the digestive system. As a result, obesity, eating disorders and gastrointestinal dysfunctions are treated with therapies developed largely by trial and error.

“Understanding the two-way conversation that the brain and stomach are having is a critical step toward addressing the obesity epidemic,” says Terry Powley, the Ben J. Winer Distinguished Professor of PSYCHOLOGICAL SCIENCES.

In Powley’s laboratory, researchers are working to identify and study the circuits in order to design better treatments for disorders of ingestion and digestion. Thanks to funding from the National Institutes of Health, the team uses the latest cellular and molecular tools for tracing and imaging individual neurons and for investigating the neural circuits and networks that the brain uses to communicate with the stomach and digestive system.
PARKinson’s DISEASE: IDENTIFYING ENVIRONMENTAL CAUSES

Parkinson’s disease is a devastating neurodegenerative disorder that affects more than one million Americans, and it has long been linked to a variety of possible environmental causes. In fact, only about 10 percent of Parkinson’s disease cases can be directly linked to inheritance, says Jason Cannon, associate professor in HEALTH SCIENCES.

Funded by the National Institutes of Health and as a Showalter Faculty Scholar, Cannon is developing new models to test interactions between environmental and genetic factors — and also to test potential treatments. Within his lab, a variety of projects examine how genes, environment, and aging interact and how such interactions may be targeted for therapeutics.

Currently, Cannon’s group is exploring how dietary factors may be important in Parkinson’s. The focus of the research is on heterocyclic amines, which are compounds formed in abundance during high-temperature meat cooking.
PARENTING PERSPECTIVES

From the moment of birth, human beings are social creatures. Relationships within a family unit provide a foundation and context for our emotional, social and cognitive achievements. German Posada’s research focuses on the development of parent-child attachment relationships from birth through age eight.

“Child-parent attachment relationships are linked to developmental outcomes and later close relationships,” says Posada, associate professor in HUMAN DEVELOPMENT AND FAMILY STUDIES. “We need to understand the processes involved in constructing effective parent-child relationships and how they impact future developmental trajectories.”

By observing child-mother interactions in different social and cultural settings, Posada and his team gather information on the interactions that support children becoming confident in the availability of important people in their lives and also in exploring their environment. These findings can inform intervention programs aimed at improving the quality of care for children.
Ostracism — the act of ignoring and excluding — is a behavior that exists in all social creatures. Kip Williams, a distinguished professor of psychological sciences, focuses on group processes and social influence. He is fascinated by what happens when individuals are deprived of even the most superficial social connections.

In his research, he has found that the initial reaction to ostracism is pain, which is felt by all individuals regardless of personality or situational factors. He examines important differences between social and physical pain. One such difference is that social pain can be relived over and over again, causing pain on each remembered instance.

"Ostracism instigates actions aimed at recovering thwarted needs of belonging, self-esteem, control and meaningful existence," he says. Williams’s investigations seek to understand the effects of ostracism on social susceptibility, pro-social behaviors and aggression. His most recent study surveys the state of ostracism research and points to the need for further understanding of ostracism-related aggression, including interventions. He is also investigating whether ostracized individuals find joining extreme groups more attractive than joining moderate groups.
A BUSINESS MODEL FOR IMPROVING HEALTH

There is a movement afoot to enhance community health through performance management and quality improvement of public health services. Sandra Liu and her team are examining such an effort in Indiana, thanks to funding from Indiana’s Clinical and Translational Sciences Institute.

A professor of CONSUMER SCIENCE with a strong business background, Liu has applied her performance-improvement model to the public health context. She has worked closely with multiple local health departments, helping them reconfigure their implementation methods and strategies for promoting health among residents of the community.

“We discovered that in a given organization, the top management team plays the critical role of champion,” Liu says. “It’s the leadership team that can instigate and execute organizational transformation.”

Through this project, Liu developed sustainable business models for multiple community-based health and wellness initiatives, all based on providing local health departments an infrastructure for success.
**SUSTAINABLE TOURISM IN DEVELOPING LANDS**

From the great eastern plains of Colombia to the mountains of Nepal, communities use tourism as a tool for sustainable development.

In Colombia, the vast Orinoquía region is home to incredible biodiversity, the cowboys of the Los Llanos and unexplored national parks. After 50 years of conflict, the area is awakening and preparing to welcome visitors: tourists.

Jonathon Day, an associate professor of HOSPITALITY AND TOURISM MANAGEMENT, works with the people of Orinoquía to ensure the benefits of tourism are spread across the region where people are building new, post-conflict lives.

“We are helping the locals apply the principles of ‘sustainable tourism’ to ensure the best possible outcomes from the growing opportunity,” says Day, who teaches Purdue’s Sustainable Tourism and Responsible Travel class each spring.

In Nepal, Day guides teams of enthusiastic HTM undergraduate and graduate students on trips to remote villages where tourism has advanced economic prosperity.

Day leads a host of global research and development projects focused on sustainable tourism. “Sustainable tourism is about making sure we look after the environment and our societies and people, while we are growing the economy,” he says.

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AREAS OF RESEARCH EXCELLENCE

CENTER FOR RESEARCH ON BRAIN, BEHAVIOR, AND NEUROREHABILITATION — CEREBBRAL

With strong collaborations between basic and applied science, CEREBBRAL researchers across Purdue departments, schools and colleges are finding ways to improve the lives of our aging population.

Center scientists seek to predict neurological and neurodegenerative diseases and age-related declines. Furthermore, the increased incidence of brain-related disorders — from Alzheimer’s disease to Parkinson’s disease — makes it crucial to consider ways to extend independence and the quality of life for people who develop disease-related complications.

“We focus on making lives better, not just extending them,” says Jessica Huber, center co-director and professor of speech, language, and hearing sciences.

CEREBBRAL researchers explore the effects of aging on communication and mobility. They develop techniques and devices for improving function and independence — with the goal of making them widely available. And basic scientists examine cognition and behavior in complex biological systems by studying typical and atypical cognitive and motor activities.

For example, CEREBBRAL researchers are devising strategies to encourage people to increase their activity levels, interventions to increase working memory and experiments to discover the role dopamine signaling plays in cue discrimination.

CEREBBRAL is affiliated with the:

- Purdue Institute for Integrative Neuroscience
- Purdue Women’s Global Health Institute
- Purdue Center on Aging and the Life Course
PURDUE ACCEPTANCE AND INCLUSION CONSORTIUM — THE CONSORTIUM

Feeling accepted and included is at the heart of human thriving. The Purdue Acceptance and Inclusion Research Consortium — known simply as “the Consortium” — provides a platform to enhance the science of inclusivity.

This multidisciplinary team of faculty from HEALTH AND HUMAN SCIENCES and other colleges on campus are advancing and elevating the relevance of acceptance and inclusion research.

The Consortium focuses on the science of exclusion; interpersonal belonging; educational, organizational and political inclusion; and inclusive policies and practices.

In collaborations with experts at Purdue and around the world, Consortium researchers foresee a future where the science of inclusion takes a prominent role in the decision-making processes of individuals, organizations, institutions and nations.

Consortium faculty have foundations in psychology, neuroscience, political science, human development, education and organizational behavior.
The center impacts the lives of thousands of families by working with organizations that serve families every day. State and local policymakers learn about new research on families and children — and the impact an issue or policy may have on families. Employers gain insight on how to help their employees balance their work and home lives. Center members share their emerging research on families and health to promote understanding of family processes on individual health and well-being.

Through research, engagement and outreach, MFRI works to improve quality of life for military and veteran families. Each year, the institute addresses a variety of needs through grants, educational materials, community programs, a resource library, training workshops and conferences, and public policy work. MFRI also collaborates with the U.S. Department of Defense, the U.S. Department of Agriculture, and others to conduct research on and for military families.

"Through the Center for Families and the Military Family Research Institute, Purdue University can exert greater influence on our state and nation to ensure that families — our most universal and fundamental social institution — receive the support they need to do their work," says Shelley MacDermid Wadsworth, CFF and MFRI director.
INGESTIVE BEHAVIOR RESEARCH CENTER

Globally, an estimated 800 million people are undernourished and 1.3 billion are overweight or obese, extremes that are associated with serious health complications. Additionally, billions suffer from specific nutrient deficiencies such as iodine, iron and zinc. Causes of these problems are multiple, but dysfunctional eating is a prominent one.

At Purdue, the Ingestive Behavior Research Center (IBRC) was created to explore the biological and environmental determinants of food and beverage intake, as well as the physiological and behavioral consequences of healthy and unhealthy ingestive behaviors. The IRBC draws on the expertise of about 45 faculty members from 16 departments across six colleges — exploring subjects that range from cell culture to public policy.

A primary goal is to train the next generation of ingestive behavior researchers, educators, practitioners and policymakers. To meet this goal, a curriculum was developed leading to a concentration in ingestive behavior. Nearly all students completing the program progress to postdoctoral research or tenure-track faculty positions.

The IBRC hosts a biannual international conference on topical issues in the field. The aim is to provide balanced, cutting-edge knowledge to researchers, clinicians, policymakers and students.
The Purdue Autism Cluster was established to develop an interdisciplinary and coordinated effort to understand, assess and treat individuals with autism spectrum disorder (ASD). Research approaches are varied — from biological and genetic to behavioral and applied.

"By pulling different ideas and methods from different disciplines, we’re really looking at autism through a unique lens — which would not be possible without this interdisciplinary team," says Bridgette Tonnsen, assistant professor of psychological sciences.

For example, Tonnsen is leading a long-distance telehealth study that could help researchers identify autism symptoms in infancy, which could ultimately help children receive targeted therapy earlier. In this project, she collaborates with Purdue faculty experts in the fields of speech, language, and hearing sciences, psychology, communication, and biological sciences.

Purdue's autism researchers are deeply invested in testing and delivering new clinical interventions for children with ASD in addition to generating the basic research needed to make these interventions possible. For instance, A.J. Schwichtenberg, co-director of the Purdue Autism Cluster, looks at the roles that sleep plays in treatment, language learning, autism emergence and family life.

Other work includes studying variations of the neurotransmitter called GABA in children with autism, measuring electrodermal activity in children with autism, examining vocalizations in infants at risk for ASD, and an autism summer camp.

Faculty associated with the Purdue Autism Cluster have appointments in the colleges of Health and Human Sciences; Science; Education; and Veterinary Medicine.
LIFE SCIENCE MRI FACILITY

The Purdue Life Science MRI Facility is a core research facility that houses a 3T Siemens MAGNETOM Prisma MRI scanner.

Supported by the College of Health and Human Sciences, the MRI facility is dedicated to advancing basic and applied life science research at Purdue — with an emphasis on understanding human health and disease.

With this resource, campus researchers explore topics such as nutrition; environmental health; psychology; motor disorders; autism; cancer; neurodegenerative disorders; basic brain research; and speech, language, and auditory disorders.

“This is totally novel,” says Ulrike Dydak, director of the Purdue Life Science MRI Facility. “For example, we hadn’t been able to do sodium imaging before the new MRI facility became available.”

Another new capability: the scanner now enables researchers to visualize GABA, a neurotransmitter, throughout the brain. “For the first time, we’re able to measure GABA in the whole brain instead of a single brain region, Dydak says. “This technology opens possibilities that we have never had before.”
The health of women and girls is of particular concern as a result of gender-related biological differences, socioeconomic status and disparities in research involving women participants. The Women’s Global Health Institute at Purdue delivers solutions to these challenges through research, training and assistance to technology commercialization, both national and international.

The institute integrates strong capacities in technology, engineering, and natural and social sciences. It is a hub for interdisciplinary research focusing on: 1) disease prevention and wellness; and 2) early detection and effective interventions for preventing and treating diseases in bone health, women’s cancers, and neurodegenerative disorders.

“Every woman has the right to health,” says Connie Weaver, WGHI director and distinguished professor of nutrition science. “We take advantage of the strong science and technology capabilities at Purdue to focus on early detection of women’s diseases, disease interventions and health differences between sexes, and primary prevention in our focus areas.”

The institute brings together more than 60 researchers from across campus. This distinguishes WGHI from other women’s advocacy centers around the country. Proactive approaches include:

• Researching biomarkers for pre-disease conditions in at-risk populations.
• Understanding behaviors that promote a healthy lifestyle.
• Developing technology to aid clinicians in early diagnosis and detection.
• Measuring the effectiveness of therapies and drug design and delivery after disease onset.

The institute also provides an environment where students can engage in learning and training opportunities that will better prepare them for careers related to women’s health.
RESEARCH CENTERS, INSTITUTES AND RESOURCES

A.H. Ismail Center for Health, Exercise and Nutrition
Arthur Avery Foodservice Research Laboratory
Ben and Maxine Miller Child Development Laboratory School
Center for Families
Center for Research on Brain, Behavior, and NeuroRehabilitation (CEREBBRAL)
Center for the Study of Lodging Operations
Ingestive Behavior Research Center
Life Science MRI Facility
Max E. Wastl Human Performance Laboratory
Military Family Research Institute

Human Motor Behavior Group Laboratory
Nutrition & Exercise Clinical Research Center
Purdue Acceptance and Inclusion Consortium (The Consortium)
Purdue Autism Cluster
Purdue Bionutrition Center
Purdue Tourism & Hospitality Research Center
Women’s Global Health Institute

HHS AFFILIATED RESOURCES
Center on Aging and the Life Course
Indiana Clinical and Translational Sciences Institute (CTSI)
Purdue Institute for Integrative Neuroscience

For more information on each of these research facilities, visit www.purdue.edu/hhs/research.
One of the hallmarks of a Purdue education is the wealth of hands-on learning opportunities. That is especially true in the College of Health and Human Sciences.

One of the most immersive learning experiences offered is undergraduate research. Across all nine academic units in HHS, students have opportunities to work on faculty-mentored research projects.

In collaboration with Purdue’s Office of Undergraduate Research, the College of Health and Human Sciences offers the HHS Undergraduate Research Scholars Program for exceptional students doing scholarly work with a faculty member for a semester. Student researchers have the chance to present their research at conferences on campus or nationally and also a chance to be chosen for publication in the Journal of Purdue Undergraduate Research.

Here is a list of research projects some HHS students are working on:

• Examine the relationship in math performance between monolingual English speakers and English language learners.
• Mechanisms underlying aging-related loss in manual dexterity.
• Synergistic toxicity of the heavy metal lead and radiation.
• Visitor harassment across the world: understanding the phenomenon in Shanghai, China.
• Determining the greatest contributor of sugar-sweetened beverages in the diets of food pantry clients in Indiana to develop specific interventions to reduce intake.
• Simulated construction equipment training with internal-focus attention and external-focus attention.
• Parent-child relationship quality effects on parental differential treatment.
• Teaching inclusivity: an analysis of the efficacy of diversity interventions through measuring behavioral outcomes.
• Within meal variability of feeding behaviors and duration in children with spastic cerebral palsy.
• Vitamin D regulation of metabolism to prevent breast cancer.
HHS AT A GLANCE

4,055 UNDERGRADUATES
536 GRADUATE STUDENTS
233 FACULTY
55,513 ALUMNI
9 ACADEMIC UNITS
3rd LARGEST COLLEGE AT PURDUE

$32.8 MILLION EXTERNAL RESEARCH FUNDING 2016-17

Data reflects fall 2017 semester