To the Bat Cave
Tim Carter works to save imperiled species ➤ P. 6

Drama Queen
Jennifer Blackmer earns accolades as a playwright ➤ P. 24
WELCOME

Fall 2018

Sponsored Projects Administration (SPA) is again pleased to celebrate with the Ball State University community its accomplishments in research, scholarly, educational, and creative endeavors. Working with a wide variety of stakeholders, SPA continues to move forward on its mission to provide the highest level of service possible throughout the sponsored projects lifecycle.

In addition to sharing the accomplishments of many faculty, professionals, staff, and students, this magazine includes the fiscal year 2017–18 records pertaining to SPA. Figures include grant awards, contracts awarded to University centers and institutes, and funding to the Ball State University Foundation that resulted in sponsored programs.

As the University celebrates its first century and plans for its second, we extend our deepest thanks to all faculty, professionals, staff, students, and administrators alike. On behalf of the first-rate and hard-working SPA staff, we offer our warm regards and best wishes for its accomplishments in research, scholarly, educational, and creative endeavors. Working with a wide variety of stakeholders, SPA continues to move forward on its mission to provide the highest level of service possible throughout the sponsored projects lifecycle.

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Fall 2018

4 Investigating ALS with Ice Bucket Challenge Dollars

Ball State’s Phil and Melissa Smaildin receive grant to research the fatal neurological disease.

6 Bats Make the World and Tequila Go Around

Tim Carter works to save imperiled species.

8 IT Workshops In A Box: An Introduction to Higher Paying STEM Jobs

The median income for a web developer is $65,000. It’s $80,000 for a computer programmer and $110,000 for a software developer.

9 Engaging WIPB’s Community

For the past 47 years, WIPB, Muncie’s PBS station, has served 22 counties in east central Indiana and western Ohio.

10 Thinking About the Past

The infectious worldview of this year’s outstanding research award recipient, Dr. Joseph Marchal.

12 Copper Communication

Hundreds of years ago, the indigenous tribes of North America had a different kind of social networking and one Ball State archeologist and his students are on the hunt for how copper played a role. Yes, copper.

14 Fighting Health Disparities in Indiana

Research has proven the detrimental health disparities within minority communities compared to their white counterparts.

16 Angling to Sustain the World’s Inland and Recreational Fisheries

Whether it’s Lake Michigan, Prairie Creek Reservoir, or the White River, some people swear by their local fishing holes, “to find the best bass, catfish, (insert fish name) here.”

17 A New Faculty Fellowship

Meet the first person to receive the Ball Brothers Honors College Faculty Fellowship.

18 Investigating Nucleic Acid Nanoparticles

Imagine the height of a dime sliced one million times—a that’s a nanometer.

19 Literary Failures and the Men Behind Them

Aspire Internal Grant Award Winner Dr. Ben Blascom

20 Teaching Independence Through Exercise

Aspire Internal Grant Award Winner Dr. Laura Bassette

21 Turning Sulfur into a Functional Material

Early Career Researcher Courtney “Cori” Jenkins Root

22 Think Dating Is Bad? Try Being A Fish Exposed To Toxins.

Early Career Researcher Jess Ward

24 Two Worlds Collide

How science created a theatrical genius.

26 Annual Report 2017-2018

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Sponsored Projects Administration
Ball State University
Investigating ALS with Ice Bucket Challenge Dollars

By Linda White

In July 2014, a strange craze swept the nation. Celebrities, politicians, and everyday people took on the ALS Ice Bucket Challenge (IBC). Whether they were in professional suits, swimsuits, or shorts, challengers poured a bucket of ice or ice-cold water over their heads. If they weren’t that brave, they instead made a donation to the ALS Association.

The summer campaign brought new attention to a crippling and fatal neurological disease. ALS is also known as Lou Gehrig’s disease. The ALS Association raised $115 million that summer, and now researchers all over the country are reaping the benefits including Ball State’s Phil and Melissa Smaldino. After amiring two years ago, the Smaldinos received a $50,000 starter grant from the ALS Association. “I did not have background in neuro degenerative disease or neuroscience,” said Phil Smaldino. “Two years ago, ALS wasn’t even on our radar, but the data led us there, so it made a lot of sense to pursue it.”

While the ALS Association, with the National Institutes of Health (NIH) and the Center for Disease Control (CDC), jointly fund $128 million of research, $18 million of that amount is from the IBC. That’s according to ALS Indiana Chapter President Tina Kaetzel. Kaetzel said IBC dollars allowed the association to fund investigators like the Smaldinos who hadn’t previously researched ALS. “Neuro collaboration is one of the major research strategic initiatives that were made possible due to the ALS Ice Bucket Challenge. That’s a key strategy that the national organization has taken.”

The Smaldinos study one human protein that’s able to “untie knots” that form in our DNA. The “knots” are called G-quadruplexes. “When the knots are formed, the gene is turned off. When the knots are unwound by this protein, the gene can be turned on. We specifically study it in a disease state where the process is disrupted. So, we study the role of this protein which is able to untie the G-quadruplexes and how that may either help or make the disease worse,” said Phil Smaldino.

Dr. Phil Smaldino’s background is cancer biology and Dr. Melissa Smaldino’s background is neuroscience. She previously researched epilepsy. As co-principal investigators, the two troubleshoot projects. As a part time researcher, Melissa manages the lab, works on grant-funded projects and analyzes data.

“I think we complement each other,” said Melissa Smaldino. “He has strengths that are my weaknesses and I have strengths that are his weaknesses. I stay at home with our children too, so it was our intention that we would work together on this project rather than applying for a position and having my own research lab.”

Because of their earlier research, Phil Smaldino said, it made sense to apply for an ALS starter grant. “It was a good fit for us because I had been studying this protein, and I was focused on studying G-quadruplexes and Melissa had the neuroscience background. There was a semi-recent discovery that certain ALS cases were caused by an excess of G-quadruplexes. It was kind of a perfect grant for us. So we received that in 2017.”

The grant helped employ seven students in the lab this past summer, whom Phil Smaldino called essential to the lab work. As a former Ball State master’s student, Melissa Smaldino understands that students need to be introduced to different types of research. “A lot of students will go into industry or get their PhD, so they need internships or opportunities in the department to get exposure to research. It is an invaluable experience for the students because without experience, it’s hard to get into PhD programs or industry positions now. It’s very competitive. This really sets students up well for future opportunities.”

Antoni Chambers, a native of Valparaiso, Indiana, is one of those students. He graduated in May with his master’s in biology. “I’ve learned a lot of technical skills with different protocols, also a lot of soft skills like critical thinking. I’ve also gotten a lot of professional development skills as well. I’ve been in quite a few leadership positions here. The master’s program has been especially valuable to me.”

“We’re very proud of them and all of their hard work, and as Phil said, without the students, the lab wouldn’t exist,” said Melissa Smaldino. The Smaldinos’ starter grant is for one year with the option to apply for multiyear grants. They hope to publish and present the results with their students.
Bats Make the World and Tequila Go Around

By Linda White

Without them, farmers would spend millions of dollars on pesticides, certain trees may not exist, and tequila lovers would be out of luck. Bats play an important role in our ecosystem, and if we lose them, the ecosystem could change quite a bit.

A certain Ball State University researcher would know. Known fondly as the bat guy, Professor of Biology Dr. Tim Carter keeps track of bats in Indiana, the region, and nationally. Carter arrived at Ball State 12 years ago. “The position was for a mammologist specializing in bats but also does work with small mammals and other things. I thought, ‘Wow, this is really perfect.’”

Carter has been working on a treatment for white nose syndrome using chitosan. A derivative of chiton, it’s found in the outer shell of shrimp. The treatment kills microorganisms while promoting healing. So far, the treatment on bats in Michigan and Texas inhibits fungal growth. The treatment is promising but also challenging at the same time. “It doesn’t hurt the bats, it doesn’t make it any worse, but it doesn’t fix it. We’re seeing mild improvements, and there’s nothing else being developed at this time. Even a little improvement is better than no improvement. Instead of seeing 50 percent of the bats die, we only see 35 percent or 40 percent of the bats die. It is better.”

Researchers suspect cavers imported white nose syndrome from Europe to Albany, New York. It was likely spread to the Midwest and then hopped to Washington by contaminated cavers gear and migrating bats spreading fungi spores in caves. Despite the treatment outcomes so far, Carter remains vigilant and focused on the problem at hand. “And so, we really see that we’re fixing the animals from an immune system and infection level, but we’re not seeing that translate into increased survival and we’re not exactly sure why. It’s a complicated process, unfortunately.”

Complicated or not, Carter loves taking his students on his journey. He said his research would not happen without students like Keifer Titus who graduated in May with his master’s in biology. Titus, who is from Blacksburg, Virginia, came here because of Carter, who is well known for his research in the bat world.

Titus calls his research with Carter fast paced. “The master’s has helped me to become more independent. Using problem-solving skills and interacting on a professional level with colleagues in the field has just given me a different perspective on how the real-world operates. It’s been an exponential step in terms of responsibility and maturity. So that’s definitely going to help me in making the decision to move forward.”

What’s next for Carter and his students? He’ll continue his research on finding a cure for white nose syndrome and working with land managers on understanding how to manage ecosystems that promote bats and other animals.

“As humans, we’ve altered the environment, and unfortunately, that means it’s our responsibility to help control and manage that environment,” said Carter.

“If you have a love of tequila, without bats there is no tequila. The agave which makes tequila is solely pollinated by bats. They are the only thing that pollinates the agave.” —Dr. Tim Carter
STEM Jobs to Higher Paying

Box: An Introduction

IT Workshops in a Box: An Introduction to Higher Paying STEM Jobs

By Linda White

The median income for a web developer is $65,000, it's $80,000 for a computer programmer and $100,000 for a software developer. According to U.S. News & World Report, the top 10 technology jobs all have low unemployment and pay well. But if you haven’t been exposed to these careers, you may not know they exist or that they’re an option.

Two Ball State researchers are hoping to change that after creating STEM-oriented workshops for middle and high school age students. Dr. David Hua and Kirsten Smith began their partnership in 2014. They created a series of IT Workshops in a Box, which included STEM related activities. Initially, they ran these workshops at local youth serving organizations, including Motivate Our Minds and the Muncie Public Library.

Wanting to reach as many students as possible, they turned to the “train the trainer” model. “That’s when we realized that we as individuals on campus can only impact a small number of kids,” said Hua. “It was imperative to us to try to empower other organizations to do this with their kids. That was the goal.”

With a $6,000 grant from the Community Foundation of Muncie and Delaware County, Hua and Smith invited community nonprofits that already work with underrepresented youth to learn about STEM fields and then in turn, spread the word and expose students to high-paying technology jobs. “Right now, things are getting a lot better,” said Smith, “but it’s still a very heavily dominated white male industry. And so we really tried to expand the opportunities for people, And starting with the kids seems to be the best way to do it.”

The local youth serving organizations allowed us to do it. It was great,” said Smith. “We’re really grateful to the Community Foundation of Muncie and Delaware County because we really couldn’t have done it without them. It’s not a huge grant in terms of money, but I just think we’ve so committed to getting these opportunities out to kids, it was enough that allowed us to do it. It was great,” said Smith. When not creating technology activities for workshops, Smith is the associate director, technology officer and labs manager for the Center for Information and Communication Sciences (CICS).

Hua, an associate professor, started Ball State’s undergraduate computer technology program. Hua and Smith began their partnership in 2014. They created a STEM-oriented workshops for middle and high school age students.

The library offers a Digital Climbers program where they introduce new technology to its young patrons. The library immediately included some of the “train the trainer” activities like computer dissection in its own program.

It impressed Germann. “I had never opened up a computer before,” she said. “I never would have thought to do that. And that to me was the biggest thing we implemented here in our Digital Climbers program. And it’s gone really well. It was really fun to learn about it and then be able to bring that back to the kids and say, ‘Hey look at this. Look at this cool thing I learned. Let’s do it together.’” Germann also said library staff encourage students to hone their skills and consider turning them into a career one day.

Hua, Smith, and their team created videos of the workshops. Their next goal is to post them online and encourage other nonprofits to watch them and teach their own students about the benefits of careers in technology.

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For the past 47 years, WIPB, Muncie’s PBS station, has served 22 counties in east central Indiana and western Ohio. Now the station will be using a long-time employee to guide its local content into the future. Lori Georgi started with Ball State University Media Services as a producer/director in 1991. Since then, Georgi has held several different titles on campus and was recently promoted from community engagement and membership manager to content director of WIPB and Indiana Public Radio.

Georgi has received $665,000 in external grant funding, used for community engagement initiatives to extend learning beyond the broadcast. Community engagement has been an important part of WIPB’s mission to educate, entertain, and engage the communities served by covering a wide range of topics including early childhood education, poverty, race, and science.

Georgi’s next project is celebrating the 40th year of Telesale, the auction that raises money for the station’s 22 counties. “WIPB is a big part of the University, I think it’s really important that we have a local station here, and we do local content.”

WIPB: “This year, because it’s the 40th anniversary, we will not only be doing Telesale online, but we will do a live night on WIPB. We plan to bring people back for that one evening who have worked Telesale throughout the years to share their memories of past Telesales and to help auction off some great items.”

After WIPB’s special night, Georgi will focus on her new role as content director, collaborating with the community to develop and create local content, building a bridge between Ball State and the station’s 22 counties. “WIPB is a big part of the University, I think it’s really important that we have a local station here, and we do local content.”

Engaging WIPB’s Community

Fall 2018
Thinking About the Past

The infectious worldview of this year’s outstanding research award recipient, Dr. Joseph Marchal

BY ADEBOYE OLANIYAN

With an almost old-fashioned finesse—wave-like hand gestures and an uneven baritone voice—Dr. Joseph Marchal, associate professor of religious studies, introduces his academic scholarship with a simple description: “I live half my life in the first century and the other, in the 21st century.”

This casual comment is a peek into Marchal’s transdisciplinary research approach in biblical studies—the study of Scriptures of Christianity and Judaism. “Here you are thinking about issues of translation and interpretation,” he said. “You are using skills about transferring ideas from one way of thinking to another way of thinking. Right off, there is something interdisciplinary about that.”

His exegesis of the letters of Apostle Paul is to treat them “more like cultural artifacts and less as theological treatise,” which helps to make connections to popular issues today like gender, slavery, and power dynamics between countries and people. Marchal believes citizens should pay attention to the ways biblical texts influence our modern way of life. This “heavy” influence makes asking critical questions about the interpretation and application of these texts relevant.

This Fall, Marchal marked his 11th year at Ball State. He attributes part of his success to being in a university community like ours. “There hasn’t been an expectation about one right way to do scholarship,” he said about Ball State’s research and academic praxis. He goes on to talk more about how continued support will empower the many talented individuals in the humanities to contribute more to the University and Muncie community.

“Our mission is to advance knowledge and educate the next generation of Hoosiers and everyone else who wants to come to Indiana,” he said about Ball State. His penchant for asking questions and reflecting on the past has led him to cross disciplines. In the words of Dr. David Concepción, professor of philosophy at Ball State, “Joseph Marchal is transforming the nature of scholarship in his subdisciplines.”

It is easy to see how this level of output—books (five in the last 10 years with a contract for two more), journal articles (25 of them in the same 10-year period) and speaking engagements—might only allow limited time for other responsibilities. With a busy schedule, Marchal said, “we have to make hard choices to perform at the level we want.”

Teaching and researching are intertwined...Teaching keeps me excited about the topic and research keeps me informed.”

—Dr. Joseph Marchal

When he is not writing about Paul’s letters—easily his favorite research focus—he teaches three courses each semester at Ball State. “Teaching and researching are intertwined,” Marchal said. “Teaching keeps me excited about the topic and research keeps me informed.”

When asked about how he helps students navigate the sometimes-troubled waters of religion, he says, “The goal is not getting them to agree with you; the goal is to get them to be more careful thinkers.”

Dr. Joseph Marchal brings his research to the classroom, connecting first century texts with 21st century issues.
By Linda White

Social networking in today’s world means Facebook, Instagram, Snapchat, and Twitter. But hundreds of years ago, the indigenous tribes of North America had a different kind of social networking, and one Ball State archaeologist and his students are on the hunt for how copper played a role. Yes, copper.

Anthropology professor Dr. Mark Hill used National Geographic and Provost Immersive Learning grants totaling $26,800 for analysis and a field school this past Summer to study the relationship between production metals, primarily copper, and society. Hill and his students excavated an area on Lake Superior in the Keweenaw Peninsula in Michigan. It’s part of the Ottawa National Forest.

They’re looking to answer questions such as: How was the metal mined? How was labor organized? And what kind of effects do metals have on social organization and technology?

“Our principal goal is to produce a management document for the Forest Service that tells it this is what you have, this is how you should manage this resource, and this is how we should protect it, keep it, and monitor it.”

The opportunity to participate in an archaeological dig like the one in the Upper Peninsula of Michigan wasn’t lost on the students who attended the summer immersion class. “This was something that was pretty rare in archeology because excavation can be really expensive,” said Lindsey Cron, a senior anthropology major from Okeana, Ohio. “It was really cool Dr. Hill got the money, the students were chosen, and the opportunity for us to see archeology.”

According to Hill, it’s possible to rewrite our past due to new information about it. The information he and his students learn about this region may enhance what’s known about this part of Michigan, already known as Copper Country.

“By understanding this better, we’re not only contributing to our understanding of the past, but we’re contributing to people’s identity and value today. There are real-world implications to this. People use this to promote who they are and what it means to be from the Copper Country.”

Hill will also be looking for any connections between copper mining in Michigan and the Ohio Hopewell culture. He just wrapped up a $260,000 National Science Foundation grant (award #1419225) where he studied the exchange of exotic metals in central Ohio. The Hopewell culture includes the Native Americans who lived along the rivers in the northeastern and Midwestern United States.

Through his research, he discovered the metals/copper weren’t all coming from the Lake Superior basin. One school of thought was that they were. Hill said his new findings speak to a new chronology of how social interactions were taking place within the Hopewell culture. “Long term—the better we understand how that process works, how social structures were arranged, and how materials flow through these social arrangements, the better we understand the past, but also the better we understand how the small-scale communities come together into larger political entities.”

And, Hill said, by understanding our past, the world will better understand its present. “And it informs people’s identities. It informs people’s interactions with other people. The past is not something that is over and done with. It lives on in our perceptions, in our understandings, and in our agreements. So just the very act of trying to understand the past, helps to understand us in the first place.”

―Dr. Mark Hill

We can’t do these research projects without students. They’re learning how archeology, in particular, functions within a federal agency and what laws and policies are, that govern the management.” —Dr. Mark Hill

Ohio. “It was really cool Dr. Hill got the money, the time, and the support to pick students to go and see how archeology works. I’m hoping to pursue a future in archeology. I really want to go to grad school next year for this, and this dig is a necessity to move on in my field.”

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In addition to excavation, Hill’s students looked for mining areas with ground penetrating radar (NSF award #1531388). They also used a portable X-ray fluorescence analyzer to look for changes in the soil chemistry. After their analysis, Hill and his students will also produce a management plan in reference to their dig site for the U.S. Forest Service. Hill spent nearly 20 years working for the Forest Service before returning to higher education to earn his doctorate in anthropology.

“More broadly the copper and silver from that region is featured prehistorically across North America from the Great Plains, east to the Atlantic. About half the continent is participating in exchange systems using this metal.”

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Disparities in Indiana

It’s not about the repetitive research results of IMHC. One of their colleagues sees their work in this field as important because it’s not about the repetitive research results of known health disparity facts but taking action to improve the statistics.

“You don’t need some rocket scientist to reduce health disparities. There are some simple measures that can help minority communities, but it takes a different type of approach,” said Khubchandani.

Improving the Message

A nurse practitioner, Dr. Juanita Ebert Brand, an associate professor of nursing, is on her third consecutive grant from the Indiana Minority Health Coalition (IMHC). One of her colleagues sees this work as important because it’s not about the repetitive research results of known health disparity facts but taking action to improve the statistics.

“You don’t need some rocket scientist to reduce health disparities. There are some simple measures that can help minority communities, but it takes a different type of approach,” said Khubchandani.

Fighting Health Disparities in Indiana

By Linda White

Time and time again research has proven the detrimental and, at times, fatal health disparities within minority communities compared to their white counterparts, whether it be infant mortality, obesity, or access to health care, among others. “For some reason racial and ethnic minorities have a huge disadvantage,” said Dr. Jagdish Khubchandani, associate professor of health science at Ball State. “Unless you address them through good implementation of evidence-based projects, you cannot solve these problems.”

Three Ball State professors, all women, are on the forefronts fighting health disparities in Indiana with their research. Two are working on ways to reframe the message so patients are informed about the condition and its impact. Additionally, Brand found those interviewed had barriers related to accessing care related to vaccination, as well as lack of knowledge and understanding of vaccination initiation and scheduling for vaccination series. Her goal is to provide real-time knowledge and understanding that IMHC will be able to use as it crafts messaging for various minority groups regarding HPV vaccine. This will provide clear, culturally coherent information—in order to allow various populations to make informed decisions regarding vaccination for HPV. "No matter what population you are working with, it is critical to make sure you have provided correct and relevant information that is culturally congruent and appropriate. This allows persons to make informed decisions regarding vaccination using correct information that is delivered in a way that addresses social and life experiences and as well as the science behind it.”

While Brand isn’t directly involved with crafting a health care message with her research, assistant professor of health science Dr. Jean Marie Place is. Place used strategic frame analysis developed and promoted through the Frameworks Institute (FI) to encourage better prenatal and maternal care practices in the Hispanic/Latinx population. The FI is a body of researchers interested in reframing social issues, using different messages than have been used in the past.

With a $20,000 grant from IMHC, she and her research team first developed and tested metaphors to encourage healthy prenatal and maternal living. They came up with “planting a seed.” “It helped to change the conversation with expectant mothers to understand the threat of infant mortality not just in utero but after the baby is born. When we brought up the seed, when we brought up gardening and planting, they said, oh yes, planting the seed is like conception. Watering the seed is like making sure you go to your doctor’s visits and having a doctor sort of weed to make sure everything is correct,” said Place.

With an additional $20,000 for a second year, Place developed a video in Spanish highlighting the metaphor to show at two Indiana clinics that treated Hispanics/Latinx. “Then the last part was in-person interactions—actually giving patients a plant, giving them a seed packet that they could water and grow at home, and to kind of reinforce this message,”

In follow-up interviews, those who saw the video said they liked it and that they shared the information with others. “We showed the video to any Hispanic/Latinx individual because we know that they talk among themselves. The more that the public understands, including grandmas, men, and teenagers, the more that the culture around these issues change.”

Up next, Place will apply for more funding from IMHC to do a study and craft a message for the African-American community regarding prenatal and maternal health issues.

Zumba at the Buley and Beyond

Two nights a week, you’ll find 50 women of Muncie’s Whity and surrounding neighborhoods dancing to get or to stay in shape at Cardinal Zumba. "The IMHC has been wonderful to work with. We’re so grateful it funded this sort of idea. It had never been done before, taking the strategic frame analysis and looking at infant mortality. So, IMHC sort of took a risk on whether it would work, but we were pleased with the results.”

“That’s the beauty of Drs. Powers’, Brand’s, and Place’s research,” said Khubchandani. “It can’t be classified as huge amounts of funding, but what I like is that they’re smart thinkers. For less money, they’re trying to produce so much value. And they’re intelligently targeting populations that sometimes people with million-dollar grants fail to do. Their innovation, smart thinking, and really finding people who need assistance have been their greatest strength and that’s why they get continuous funding.”

Residents of Muncie’s Whity and surrounding neighborhoods enjoy getting and staying in shape at Cardinal Zumba.

"You don’t need some rocket scientist to reduce health disparities. There are some simple measures that can help minority communities, but it takes a different type of approach.” — Dr. Jagdish Khubchandani

Dr. Juanita E. Brand is working to help various minority populations make informed decisions regarding vaccination for HPV.

Dr. Jean Marie Place used her research to craft messages to encourage better prenatal and maternal choices in the Hispanic/Latinx population.

Dr. Powers’ research, “It can’t be classified as huge amounts of funding, but what I like is that they’re smart thinkers. For less money, they’re trying to produce so much value. And they’re intelligently targeting populations that sometimes people with million-dollar grants fail to do. Their innovation, smart thinking, and really finding people who need assistance have been their greatest strength and that’s why they get continuous funding.”

Residents of Muncie’s Whity and surrounding neighborhoods enjoy getting and staying in shape at Cardinal Zumba.

By Linda White

Fighting Health Disparities in Indiana

Dr. Juanita E. Brand traveled all over the state to interview 90 participants, 30 from each minority group. She talked to them about what they knew about HPV, fact and/or myth. She discovered three key themes among all three groups. While there’s a trust in providers, there’s a mistrust in information, especially if it’s information that is not supported by their family and friends or there was a cultural consideration regarding message delivery.

The theme related to vaccine and vaccination beliefs was found to be inconsistent throughout the participant population—with hesitancy to vacinate, misconceptions regarding vaccine safety and complications, and discomfort in discussion of HPV transmission.

Additionally, Brand found those interviewed had barriers related to accessing care related to vaccination, as well as lack of knowledge and understanding of vaccination initiation and scheduling for vaccination series. Her goal is to provide real-time knowledge and understanding that IMHC will be able to use as it crafts messaging for various minority groups regarding HPV vaccine. This will provide clear, culturally coherent information—in order to allow various populations to make informed decisions regarding vaccination for HPV. "No matter what population you are working with, it is critical to make sure you have provided correct and relevant information that is culturally congruent and appropriate. This allows persons to make informed decisions regarding vaccination using correct information that is delivered in a way that addresses social and life experiences and as well as the science behind it.”

While Brand isn’t directly involved with crafting a health care message with her research, assistant professor of health science Dr. Jean Marie Place is. Place used strategic frame analysis developed and promoted through the Frameworks Institute (FI) to encourage better prenatal and maternal care practices in the Hispanic/Latinx population. The FI is a body of researchers interested in reframing social issues, using different messages than have been used in the past.

With a $20,000 grant from IMHC, she and her research team first developed and tested metaphors to encourage healthy prenatal and maternal living. They came up with “planting a seed.” “It helped to change the conversation with expectant mothers to understand the threat of infant mortality not just in utero but after the baby is born. When we brought up the seed, when we brought up gardening and planting, they said, oh yes, planting the seed is like conception. Watering the seed is like making sure you go to your doctor’s visits and having a doctor sort of weed to make sure everything is correct,” said Place.

With an additional $20,000 for a second year, Place developed a video in Spanish highlighting the metaphor to show at two Indiana clinics that treated Hispanics/Latinx. “Then the last part was in-person interactions—actually giving patients a plant, giving them a seed packet that they could water and grow at home, and to kind of reinforce this message.”

In follow-up interviews, those who saw the video said they liked it and that they shared the information with others. “We showed the video to any Hispanic/Latinx individual because we know that they talk among themselves. The more that the public understands, including grandmas, men, and teenagers, the more that the culture around these issues change.”

Up next, Place will apply for more funding from IMHC to do a study and craft a message for the African-American community regarding prenatal and maternal health issues.

Zumba at the Buley and Beyond

Two nights a week, you’ll find 50 women of Muncie’s Whity and surrounding neighborhoods dancing to get or to stay in shape at Cardinal Zumba. "The IMHC has been wonderful to work with. We’re so grateful it funded this sort of idea. It had never been done before, taking the strategic frame analysis and looking at infant mortality. So, IMHC sort of took a risk on whether it would work, but we were pleased with the results.”

“That’s the beauty of Drs. Powers’, Brand’s, and Place’s research,” said Khubchandani. “It can’t be classified as huge amounts of funding, but what I like is that they’re smart thinkers. For less money, they’re trying to produce so much value. And they’re intelligently targeting populations that sometimes people with million-dollar grants fail to do. Their innovation, smart thinking, and really finding people who need assistance have been their greatest strength and that’s why they get continuous funding.”

Residents of Muncie’s Whity and surrounding neighborhoods enjoy getting and staying in shape at Cardinal Zumba.

"You don’t need some rocket scientist to reduce health disparities. There are some simple measures that can help minority communities, but it takes a different type of approach.” — Dr. Jagdish Khubchandani

Dr. Juanita E. Brand is working to help various minority populations make informed decisions regarding vaccination for HPV.

Dr. Jean Marie Place used her research to craft messages to encourage better prenatal and maternal choices in the Hispanic/Latinx population.
Angling to Sustain the World’s Inland and Recreational Fisheries

By Linda White

Whether it’s Lake Michigan, Prairie Creek Reservoir, or the White River, some people swear by their local fishing holes, to “find the best bass, catfish, (insert fish name) here.” Because they love the sport, it’s common for anglers to practice regulated fishing. State agencies can fine those who take more than their limit, don’t adhere to size regulations, or fish in a prohibited body of water.

Carl Bachtel is a pro-staffer at the Bass Pro Shop in Rossford, Ohio. He hosts workshops and seminars for beginners and pros on how to fish. He said it’s important not to overharvest and to selectively harvest fish.

“You never want to take the biggest fish out of an ecosystem whether a river, a stream, a lake, or pond,” he said. “You don’t want to keep the big, big ones. You want to let those go, because they are the ones doing the majority of the spawning. They’ve lived this long and grown that big, and that means they have good genetics. You want to keep that in the fishing system.”

The health of a fishery is in part what Dr. Paul Venturelli studies here at Ball State University. Venturelli received more than $320,000 from the US Fish and Wildlife Service (award F17AC00269) and Ball State Start-up funds to research fish growth, reproduction, survival, and how these rates determine population dynamics and sustainable fishing rates. But, he said, the bigger challenge is to understand the people who do the fishing.

“Let’s say we make the regulations more liberal or more conservative—so you can keep more fish or you can’t keep any fish. What does that do to the mood of anglers?” he said. “We know that anglers who disagree with a regulation are less likely to follow it, and that negative sentiment can affect the public’s general perception of a state agency. Because anglers vote with their feet, we can also see how regulation changes affect angler behavior. Do they stop going to that lake if you make the regulations restrictive? If so, do they fish somewhere else? Do they fish less or stop fishing altogether? We have trouble answering these questions within normal fishery science.”

Venturelli’s research group is one of a handful around the globe that is working with apps to gain insight into the habits of fishers. “We know what they’re catching and where. We know, in some cases, how long that took, how far they traveled, what kind of bait they used, or whether they fished from shore or a boat. If they are entering text, we can even get a sense of their mood. It could be pretty comprehensive, but we aren’t interested in what a single angler is doing—that would be like following one car to understand traffic patterns. We have to look across all anglers to generate a picture that we can put toward fisheries conservation.”

Some states do have pretty strict standards on how much and what kind of fish anglers can keep. Bachtel said he practices CPR—catch, photo, and release. “It shows people what I’m catching, I have a good story to tell. I have a picture to back it up. And then you let the fish go and it can be caught again someday. It stays in the ecosystem and continues to live and spawn and grow the population of fish and hopefully some of their offspring will grow up and be just as big and beautiful as they are.”

Bachtel practices what some might call self-regulation. Admitting it may be a crazy idea, Venturelli believes that apps could one day allow state agencies to share information with anglers in real time and establish regulations. “We can say, ‘Anglers, this is the lake you want to fish, and this is our estimate of what we think is sustainable. We will never close the lake, but take a look at where data across all apps suggest that the harvest is relative to that, and then you decide what to do. Maybe you don’t want to fish there at all. Or you can say, ‘I’ll take too many fish out of here, then there’ll be nothing left for the future.’”

The app could also act as a decision support tool by using fish length and the best available science to give a recommendation on whether to keep that fish or throw it back. Even with some strict state laws, Bachtel said, overharvesting and selective harvesting may have more to do with the ethics of the fisher who may make better decisions based on knowledge of their favorite bodies of water. “You should learn about the ecosystem and the food web and see how everything fits together. Once you realize how important those fish you’re catching are in that system, you’ll want to keep them in there and keep it sustainable, so you’re always have a good place to fish, fish to catch, a few fish to harvest every now and then. And then you take them all out of a system, they’re gone. They’re not coming back. And that runs it for a lot of people,” said Bachtel.

It’s this type of information along with the research that professors like Venturelli do that will likely improve the sustainability of fisheries, both inland and globally. ■

Meet the first person to receive the Ball Brothers Honors College Faculty Fellowship.

Dr. Adam Kuban received $50,000 for a two-year dual appointment in the Honors College and Journalism Department. His focus is water access and water scarcity.

“Ball Brothers was looking for a unique interdisciplinary program that would attract students from many disciplines across campus to study climate change and its influence on water resources.”

Kuban designed curricular independent courses evaluating climate change arguments as well as looking at statewide and global water issues. At the end of the core classes, students will have the opportunity to study abroad for two to three weeks in a developing nation.

“We’ll have learned about local water issues as well to bridge that connection, make that connection between the water issues here at home and internationally.”

Kuban’s appointment began in February 2018. ■

It could be pretty comprehensive, but we aren’t interested in what a single angler is doing—that would be like following one car to understand traffic patterns.”

—Dr. Paul Venturelli
Investigating Nucleic Acid Nanoparticles

Imagine the height of a dime sliced 1 million times—that’s a nanometer. Dr. Emil Khisamutdinov is investigating the nucleic acid nano-world as an assistant professor in the Department of Chemistry at Ball State. “In our lab, we create different sizes and shapes of nanoparticles made of nucleic acid biopolymer.” Known to store genetic information, DNA is viewed as a polymer material used to create various types of particles in Khisamutdinov’s lab.

Khisamutdinov and his collaborators from the University of North Carolina at Charlotte and Clemson University received a $1.8 million grant from the National Institutes of Health. Part of their investigation is looking at the toxicity of these nano-objects. “Nucleic acid nanoparticles are pretty good at targeting and killing cancer cells.”

As a co-investigator, Khisamutdinov and his team will investigate the stability and functionality of the molecules, choosing the most stable ones to see if they trigger an innate immune response. “Everyone sees nanoparticle potential as drug carriers. This field is blossoming now. However, no one has studied their toxicity in depth.”

On campus since 2014, the biochemistry professor and his collaborators hope their nanoparticles will reach commercial production and play a role in fighting cancer. Khisamutdinov has also received funding from the Indiana Academy of Science and an ASPiRE Junior Faculty award.

Ben Bascom may hold a doctorate in English, but he’s also a quasi-historian who’s working on a book about the failed literary endeavors of five tragic figures from the early United States. “In many ways, the figures I work on thought they were as unique or culturally significant as someone like Benjamin Franklin, but in their efforts to prove themselves they end up appearing quite queer—meaning they don’t fit within the social norms that operated in the early United States.”

In 2018, more than $140,000 was awarded to Ball State University’s Junior Faculty to fund their creative projects and research. The awards are part of the ASPiRE Internal Grant Program for faculty who have been with the University for less than five years. Junior faculty have the opportunity to receive an award up to $15,000 to fund projects involving study or discovery that could eventually lead to external grants. Here, we profile two winners from the Departments of English and Special Education. While one is working on a book about literary failures, the other is hoping to put adolescents and young adults with autism on a path of success through exercise.

In 2018, Bascom received a $21,000 National Endowment for the Humanities grant in addition to a $6,000 ASPiRE grant to write a book based on his dissertation narrating the lives of ill-fated figures and their places in literary culture. “They all aspired for recognition and achievement, and hoped to have themselves documented in their own books but were unable to obtain those goals.”

And another was a black Revolutionary War veteran named Jeffery Brace, who settled in Vermont. Emancipated after the war, Brace’s children were stolen and placed as indentured servants, and his property was vandalized by a white neighbor who wanted it for himself. While the veteran’s property rights were recognized, he was subsequently run out of town. And just like the other people Bascom studies, the veteran’s written memories were soon forgotten. “They are a series of people who left behind what could be considered failed books, and the failure of their books suggests something about the culture of the time that I study.”

Bascom points to the idea that these real-life characters lived in the shadow of people like Franklin. “These people that lived on the margins of society, and the books they wrote remained on the outskirts of cultural memory. Either they never made it into circulation as they had hoped or the material copy of the only remaining book that they wrote is in shreds, missing half the pages that it originally contained.”

Bascom was also awarded a summer fellowship from The Center for American Literary Studies at Penn State to work on his book proposal, introduction, and to flesh out the rest of his chapters. He was one of eight people chosen to participate from an international application pool.

The grants he received will allow Bascom to use the Spring 2019 semester to finish researching at the American Antiquarian Society and write his book, Feeling Singular: Masculinity and Desire in the Early United States. When he’s not working on his book, Bascom, who joined the faculty in 2017, teaches pre-1900 American literature in the Department of English.
Teaching Independence Through Exercise

By Linda White

At 23 years old, Jessica Reed, who has autism, is learning how to be more independent. “I don’t think she’ll ever be able to live alone,” said Jessica’s mom, Patty. “She will always need somebody to be there to support her and supervise her due to safety, but yes, it is important for her to be independent, to have a job, to lead as much of a normal life as possible. The more tools we can provide people with disabilities to be independent, the better their lives will be.”

One of those tools was Dr. Laura Bassette’s study on exercise and autism. A Ball State University researcher in special education and a Board Certified Behavior Analyst, Bassette noticed those with autism struggled with motivation for physical activity and this impacted other areas of their life. Trained as a behavior analyst, Bassette wanted to use those principles to develop interventions and engage people with autism in exercise. “For people with autism, there is a struggle with motor coordination. So even just the ability to learn how to use your body differently or work different muscles can be beneficial beyond just weight loss.”

Jessica has shown more independence through the program, and no longer views exercise as a chore. She even works a couple days a week at a local bakery. Through tears, Patty explained that independence and what happens to their children after they’re gone is what parents in her situation worry about most. “We hope that we have a setup in place to help her be independent, but you never know. Luckily, Jessica’s brother is tuned to her needs. I’m hoping he’ll take over when I’m no longer able to do it.”

And perhaps there’ll be more programs like Dr. Bassette’s to help them become more independent. Bassette’s research has been accepted for publication in the Behavior Analysis in Practice journal. She also hopes to present it at conferences in the future.

Turning Sulfur into a Functional Material

By Linda White

To be a woman in a STEM field was the norm for Dr. Courtney “Cori” Jenkins, whose mom and sister are both engineers. “I came from a family where it wasn’t a question of whether or not you could do it.”

Jenkins discovered that while engineering may not have been her career track, chemistry was, and not just any chemistry, but polymer chemistry. “I find it fascinating to take nothing and turn it into something useful. And so, to me, that’s what polymer chemistry feels like. It feels really rewarding, a little more fast-paced and little more applicable than some of the other areas of chemistry.”

Jenkins received a two-year $55,000 grant from the American Chemical Society to study these polymers through inverse vulcanization, which is using sulfur and linking it with organic monomers. A major focus of her research is developing new synthetic strategies to expand how inverse vulcanization can be used. This allows Jenkins, her team, and others in the field to create new materials. Metal capturing is what Jenkins and her team of students are working on in her lab. Metal capture is using the polymers to trap metals. It can be similar to a water filter where the polymer would remove metal from water. Polymers can also be made into adhesives.

The grant is designed for undergraduate programs and to fund undergraduate students in the lab as well as supplies. Fort Wayne native Clayton Westerman, who just received his master’s, is one of those students. He said he’s learned independence from Jenkins. “It’s taught me initiative, basically its self-motivation driven. If you don’t have the drive to do it, chances are you probably won’t make it. Dr. Jenkins has been a fantastic mentor for me,” said Westerman, who began his doctoral program in the Fall.

Logan Eder, a master’s student from Indianapolis had the same experience as Westerman. “In my undergrad research at another university, all I did was sample water. Here I’m actually working with chemicals and making something that is very physical and in front of me, which I really enjoy.” Eder also appreciates the problem-solving aspect that comes with working in Jenkins’ lab. “I love it. I like that she expects us to get things done, but we can sort of choose our own adventure and the way we go about it is different than I had in my undergrad experience.”

Jenkins believes in encouraging her students just as past advisors did for her. Both of her undergraduate advisors, who were women, and her PhD advisor, John Wilker, encouraged her to do and be more. “Having people push you to be better than you think you can be is really essential. It’s about making sure everything is as solid as you can make it. And so, to me, that’s what polymer chemistry feels like.”

—Dr. Courtney (Cori) Jenkins
Think Dating Is Bad?  
Try Being a Fish Exposed to Toxins.

For fish, dating is all in the fish dance and it’s ability to attract a mate. If the dance isn’t good, the fish are less likely to attract a mate.

As an early career researcher in evolutionary biology, Dr. Jess Ward is investigating the evolution and function of behavioral interactions, like courtship rituals and predator-prey relationships, and how they alter in response to environmental change. For one of her projects, she’s received a $15,000 grant from the Indiana Water Resources Research Center to study degenerative neurotoxic effects of cyanobacteria or blue-green algae on behavior. She hopes to answer questions such as: Are fish slower at getting away from predators? Or are they slower at catching prey due to motor deficiencies? And do they have trouble finding a mate?

“The inability to escape a predator or inability to catch prey is potentially going to increase mortality,” she said. “Is it going to increase the chance they’re going to get eaten by a predator or die elsewise because they can’t find enough food? And if that happens, does that speed up the rate these toxins get moved up the food web and into humans?”

In Summer 2018, Ward had several students helping her in the lab. “They’re integral to everything I’ve done. They are the heart and soul of the lab. They keep everything running.”

Ward’s students are learning the ins and outs of running an animal behavior research lab, students like Kokomo native and Ball State junior, Hanna Mullinax. “I didn’t realize how much went into research. I didn’t realize all the maintenance it took like feeding the fish twice a day, coming in doing all the water exchanges, and so I really learned a lot about what research life is like.”

And for grad student Hanna Termarsch, a Troy, Michigan native, this is the first time she’s worked in an indoor lab. She studied snakes on Beaver Island near Central State University as an undergrad. Termarsch never thought she’d study fish, but Ward’s enthusiasm convinced her to study at Ball State for her master’s in biology.

“IT was really just her, her passion, her excitement for this lab that really got me into it. I never thought I’d enjoy working with fish. I never considered it. And I never worked inside in a lab environment so that’s new. So it’s definitely a new experience.”

The women in Ward’s lab are bucking the odds of fewer women in the STEM fields. All of them have had mentors who’ve encouraged them in the hard sciences. “It was definitely my middle school and high school science teachers, both women, who saw the light in my eyes whenever we did something interesting. So they definitely pushed me toward the scientific field,” said Autum Auxier, a Ball State junior from Wolcott, Indiana.

One of Ward’s students even worked as a teacher before returning to get her master’s in biology. Gina Lamka is from Dallas. “Before I came to Ball State, I was actually teaching fourth grade science. We had a lot to do with bringing children, especially girls into the scientific field—bringing them out into the woods and we were able to do more hands-on activities, which was great. I had a lot of the students come up to me afterward, saying that’s what they wanted to do.”

Ward hopes her work with her students will, in turn, help her get National Institutes of Health funding to study the effects of neurotoxins on cognition, decision-making, and behavioral performance. “We’re looking at the performance of larval fish, but then we’re going to grow some of them up and test them in adult stage to see whether the effects are persistent in adulthood.”

Ward said her field is just starting to figure out how human activity changes and how animals communicate with one another, potentially driving evolution in new directions. “It’s uncertain whether or not there are links to human health as well.”

Those possible links will be studied for the next two years by Ward and her students.

By Linda White

Photos by Linda White

A group of breeding fathead minnows (Pimephales promelas.)

A display of an experiment looking at environmental and genetic factors influencing the development of personality, beginning with differences in locomotor activity of embryos.

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Professor Jennifer Blackmer is the 2015 PEN/Laura Pels International Foundation for Theatre Award winner for Emerging American Playwright.

Ball State University RESEARCH

24 Fall 2018

25 Fall 2018

Professor Jennifer Blackmer is the 2015 PEN/Laura Pels International Foundation for Theatre Award winner for Emerging American Playwright. That’s the mot juste that describes Jennifer Blackmer, the 2018 recipient of the Outstanding Creative Endeavor Award. This yearly award is given to a current faculty member who is nominated by colleagues. A selection committee evaluates each application and announces the recipient at the annual Fall Opening Convocation.

Jennifer Blackmer, a professor of theater and executive director for immersive learning and the Virginia B. Ball Center for Creative Inquiry, is known to put her zeal for women’s empowerment into her creative work. This work often manifests itself in the form of plays. These plays exhibit all the trappings of a visionary who wants her audience to first hear her story, empathize, and then take action.

Two of her well-known plays, Unraveled and Alias Grace, both have a common theme: women empowerment. Unraveled explores how a woman, who is also a scientist, deals with the death of her mother, while Alias Grace is a stage adaptation of the novel by the famous author Margaret Atwood. The adaptation explores how women deal with class and power in our society.

The “dualities present in her plays” wrote Karen Kessler, professor of theater and the 2016 award recipient, “are what makes them so compelling to work and watch.”

Another play, Human Terrain—which won Blackmer the Sloan Grant from the famous Tribeca Film Festival and a finalist position at the Yale Drama Competition—is a military drama that tells the story of an American anthropologist working in Iraq for a military program, the Human Terrain System. The anthropologist, Mabry Hoffman, is caught in a dilemma as she tries to help her new friend, an Iraqi woman, survive while trying to balance her commitment to the military program. Human Terrain is now on its way to becoming a movie with production slated to start in Spring 2019.

Her fervor diffuses into conversations with her students here at Ball State. Since she arrived at Ball State in 2003, Blackmer has taught several classes including directing, playwriting, and not surprisingly, special topics in science on stage. Her enthusiasm for her students and the Ball State community is indeed palpable. “It’s OK to suck,” she tells her students while reminiscing about the times “she wanted to quit” throughout her career.

“She has a unique way of blending her interest in intellectual pursuits—science being chief among them,” said William Jenkins, chair of the Department of Theatre and Dance.

Delicate Particle Logic, another one of her plays, crystallizes how her other passions—science, especially physics, and history—blend perfectly with her creative activism for women’s empowerment. The play highlights the story behind the discovery of nuclear fission. It shows the result of the politics of discrimination during the Nazi era. Lise Meitner and Fritz Strassmann contributed heavily to the discovery but were never recognized since the Nobel Prize only went to Otto Hahn after World War I.

“I auditioned for the theater program at the University of Evansville,” Blackmer said as she described the scene that led her to the world of theater almost 20 years ago. “And I told my parents,” she continued, “that if I do not get accepted in the theater program, I will go probably elsewhere and study physics.”

How science created a theatrical genius

BY ADEBOYE OLANIYAN

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How science created a theatrical genius

BY ADEBOYE OLANIYAN
Sponsored Projects Administration (SPA) supports the University’s mission by assisting Ball State personnel in the quest for external funding to carry out their research, scholarship, and creative activity as well as subsequent award administration. Support includes identifying potential funding opportunities, guidance in proposal and budget development, submission of proposals to funding agencies, award administration, and related compliance assurances.

SPA offers workshops in sponsored projects development and administration, oversees the University’s research incentive programs, and supports early seed funding through the ASPiRE and Advance internal grant programs.

SPA fosters an atmosphere of academic, scientific, and creative inquiry; internal and external collaboration; cross-disciplinary teamwork; entrepreneurial thinking; and community engagement while promoting integrity, responsibility, and ethics in all phases of scientific, intellectual, and artistic inquiry.

External Dollars Received FY14-18

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Total Number of Proposals Submitted and Funded by External Grants

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EXTERNAL FUNDING OVERVIEW

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<td>Local Gov't Agency</td>
<td>32</td>
<td>$413,211</td>
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<td>Foreign Source</td>
<td>6</td>
<td>$530,522</td>
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</tr>
<tr>
<td>College/University</td>
<td>16</td>
<td>$1,716,518</td>
<td>12%</td>
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<tr>
<td>Individual</td>
<td>2</td>
<td>$4,154</td>
<td>&lt; 1%</td>
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<tr>
<td>Total</td>
<td>300</td>
<td>$14,356,700</td>
<td>100%</td>
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</table>

EXTERNAL DOLLARS RECEIVED BY SPONSOR TYPE

<table>
<thead>
<tr>
<th>Activity Type</th>
<th># of Awards</th>
<th>Total Awarded</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Institutional Support</td>
<td>40</td>
<td>$1,533,232</td>
<td>11%</td>
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<tr>
<td>Public Service</td>
<td>6</td>
<td>$4,323,317</td>
<td>30%</td>
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<tr>
<td>Academic Support</td>
<td>61</td>
<td>$1,608,569</td>
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<tr>
<td>Basic Research</td>
<td>40</td>
<td>$2,691,808</td>
<td>19%</td>
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<tr>
<td>Applied Research</td>
<td>47</td>
<td>$2,066,133</td>
<td>14%</td>
</tr>
<tr>
<td>Instruction</td>
<td>7</td>
<td>$2,133,842</td>
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<tr>
<td>Total</td>
<td>300</td>
<td>$14,356,700</td>
<td>100%</td>
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</table>

EXTERNAL DOLLARS RECEIVED BY COLLEGE/UNIT

<table>
<thead>
<tr>
<th>Source</th>
<th># of Awards</th>
<th>Total Awarded</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Sciences &amp; Humanities</td>
<td>96</td>
<td>$4,702,614</td>
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<tr>
<td>Teachers College</td>
<td>59</td>
<td>$3,072,529</td>
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<tr>
<td>Business</td>
<td>25</td>
<td>$1,700,228</td>
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<tr>
<td>Health</td>
<td>36</td>
<td>$1,793,498</td>
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<tr>
<td>Information Technology</td>
<td>24</td>
<td>$1,199,098</td>
<td></td>
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<tr>
<td>University Development</td>
<td>20</td>
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<tr>
<td>Academic Affairs</td>
<td>7</td>
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<tr>
<td>University College</td>
<td>3</td>
<td>$249,916</td>
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<tr>
<td>Architecture &amp; Planning</td>
<td>16</td>
<td>$188,727</td>
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<tr>
<td>Student Affairs</td>
<td>2</td>
<td>$107,000</td>
<td></td>
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<tr>
<td>Business Affairs</td>
<td>2</td>
<td>$40,200</td>
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<tr>
<td>Fine Art</td>
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<td>$24,625</td>
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<tr>
<td>Communication, Information, Media</td>
<td>3</td>
<td>$12,000</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>300</td>
<td>$14,356,700</td>
<td></td>
</tr>
</tbody>
</table>

RESEARCH RECOGNITION

Student Symposium: The 2018 Symposium continued to serve as an important public forum for undergraduate and graduate students to display and present their research and creative projects. In all, 169 individual student participants presented 114 posters and 18 papers.

Award Winners:

- Kerstyn Hall, Kinesiology | A Novel Approach of Performing Gait Analysis Using Radar Technology | Mentor: Henry Wang, College of Health
- Malachi Henry, Speech Pathology and Audiology | Sequential Production Abilities with Multiple-Symbol Utterances: Implications for Redesigning Speech Generated Devices (SGDs) for Children | Mentor: Barry Wagner, College of Health
- Marcy Simpson, Nutrition and Health Sciences | The Effect of Medicinal Mistreat on the Efficacy of Prostate Exams among Black American Men | Mentor: Jean Marie Place, College of Health
- Betsy Kemp, Biology | Assessing the Role of Traphic Interactions on Peatland Biodefilm Development Under Varied Nutrient Availability | Mentor: Kevin Wyatt, College of Sciences and Humanities
- Deborah Mattson, Landscape Architecture | A Piece of the Limberlost | Mentor: Susan Tomizawa, College of Architecture and Planning
- Jason Avasesian, Kinesiology | Biomechanical Analysis of Unilateral Landings in Female Volleyball Players after a Dynamic and Combined Dynamic Static Warm-Up | Mentor: Clark Dickin, College of Health
- Avery Kirschbaum, Biology | A Potentially General Role for a Conserved Protease in Translocon-Associated Quality Control | Mentor: Eric VJ Rubenstein, College of Sciences and Humanities
- Anamarie Booher, Nutrition and Health Sciences | The Impact of Perceived Barriers to Accessing Prescription Birth Control Among Female College Students: A Qualitative Study | Mentor: Jean Marie Place, College of Health

BENEFICA DAY

The 27th annual Benefica Day was celebrated October 23, 2017 in the Ball State Alumni Center. This annual event for recognizing faculty and professional personnel active in submitting proposals and carrying out sponsored projects brought together more than 100 attendees.

OUTSTANDING RESEARCH & CREATIVE ENDEAVOR AWARDS

The annual lecture and reception featuring the Outstanding Research & Creative Endeavor Awards took place on October 27, 2017 in Bracken Library. The awardee, nominated by his peers and chosen by the Creative Arts Committee was Chris Flock, a lecturer in telecommunications, who shared his creative process and integration of students and community.

The 2017 Outstanding Research recipient, as nominated by his peers and chosen by the University Research Committee, was Scott Trappe, John and Janice Fisher Professor of Exercise Science. During his lecture, held on February 2, 2018 at the Ball Brothers Foundation Hospitality Suite in Emens Auditorium, Dr. Trappe spoke on his research agenda and, specifically, HPL’s impact on the space station.

SPAN FELLOWS PROGRAM

A Keystone program for new faculty developed by Campus Liaison Stan Geidel continued during academic year 2017-18 with two cohorts of a hand-selected group of 11 faculty members chosen by the provost, AVPRA, colleges, and SPA staff to participate in a yearlong intensive program. Knowledge base and grant-writing skills are developed in order to obtain external grants in support of fundable endeavors more successfully.

Focusing on the Search

This one-hour intensive session allows six to eight participants to get hands-on, one-on-one time with the SPA research information coordinator to first sign up for COS Pivot and then how to utilize this powerful tool to develop a search—all with the help of a Pivot expert.

INDIRECT COST RECOVERY DISTRIBUTION

Per University policy, of the $1,006,125 in indirect costs recovered by the University, currently: 5 percent goes to principal investigator(s), 10 percent to departments/units, and 5 percent to the college. During the past year, the following amounts were transferred: $27,405 to PIs, $130,232 to departments/centers, and $43,591 to colleges—which makes a total distribution of $201,228.

SPN PROFESSIONAL DEVELOPMENT

SPA staff attended and/or presented at the following conferences and professional meetings:

- Federal Demonstration Partnership Meetings
- Grants Resource Center virtual conferences
- Indiana University Social Media Summit
- Midwest Research and Graduate Administrators Forum
- National Institutes of Health Conference
- National Council of University Research Administrators Annual Meeting
- National Organization of Research Development Professionals Annual Meeting
- National Science Foundation Regional Conference
- SkillPath Administrative Assistant Conference
- Society of Research Administrators Metrics Workshop
- Society of Research Administrators Midwest Meeting
- Society of Research Administrators Ohio Chapter Meeting
- Various webinars on specific topics or sponsors
- 2018 Women Working in Technology Conference
Ball State University’s Internal Grants Program was created in 1965 to provide funding to faculty and students and to support and develop projects in the areas of research and creative endeavors. ASPiRE internal grants are intended to supplement and strengthen the support for research and creative endeavors. ASPiRE internal grants are intended to supplement and strengthen the support for research and creative endeavors. ASPiRE internal grants are intended to supplement and strengthen the support for research and creative endeavors. ASPiRE internal grants are intended to supplement and strengthen the support for research and creative endeavors.

2017-18 Program Participation

The ASPiRE Internal Grants program processed 191 student proposals and awarded $25,145 to support 148 projects; 114 faculty proposals and awarded $280,592 to support 84 projects. Details of the 2017–18 ASPiRE Internal Grants program are summarized in the table, “Internal Grants Program 2017–18.” Two of the Junior Faculty awardees are featured in the 2018 issue of Ball State Research: Ben Bascom from English and Laura Bassette of Special Education. See pages 19 and 20.

Intellectual property development remains an integral component to the research enterprise at the University. SPA is responsible for both receiving initial disclosures of potential intellectual property and in serving as the University liaison with the Ball State Innovation Corporation (BSIC). The BSIC, under the leadership of President Wil Davis, directs commercialization and licensing activities related to Ball State’s works of intellectual property: everything from mobile apps to curriculum to scientific patents.

Three of the performance indicators of the recently completed Ball State Strategic Plan directly relate to SPA and BSIC’s IP efforts, under Goal 4, Objective 5: “Enhance commercialization with new opportunities and strategies.” Those indicators are to increase royalty by 50 percent (to $405,606), create a total of five start-up companies that generate significant net revenue, and increase the annual number of IP disclosures to 20.

During fiscal year 2018, 19 disclosures of intellectual property were made, while FY 2018 royalties totaled $84,379.69. Itemized listing of those IP products is below. For additional information on the IP process at Ball State, contact Stephanie Roof; for Information on the specific products available, contact Linda Swartz.

In addition to disclosures and royalties, we were also pleased to celebrate another patent for Drs. Sue McDowell and Rob Sammelson for their continued work in treating bacterial infection, specifically from Staphylococcus aureus and Streptococcus pyogenes.

<table>
<thead>
<tr>
<th>Faculty Programs – Research</th>
<th>Requests Submitted</th>
<th>Proposals Awarded</th>
<th>Award Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADVANCE</td>
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<td>7</td>
<td>$64,237</td>
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<tr>
<td>Junior Faculty Research</td>
<td>11</td>
<td>8</td>
<td>$100,170</td>
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<td>Total Research</td>
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<td>15</td>
<td>$164,407</td>
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<table>
<thead>
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<th>Requests Submitted</th>
<th>Proposals Awarded</th>
<th>Award Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Create</td>
<td>5</td>
<td>5</td>
<td>$27,500</td>
</tr>
<tr>
<td>Junior Faculty Creative Arts</td>
<td>3</td>
<td>3</td>
<td>$42,500</td>
</tr>
<tr>
<td>Total Creative Arts</td>
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<td>8</td>
<td>$70,000</td>
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<tr>
<td>Hollis</td>
<td>1</td>
<td>0</td>
<td>-</td>
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<tr>
<td>International Travel</td>
<td>28</td>
<td>27</td>
<td>$10,600</td>
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<tr>
<td>New-Faculty Start-Up</td>
<td>26</td>
<td>10</td>
<td>$28,275</td>
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<tr>
<td>Reprint/Publication Support</td>
<td>23</td>
<td>20</td>
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<tr>
<td>Travel Support for External Funding</td>
<td>4</td>
<td>4</td>
<td>$1,400</td>
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<td>Total Faculty Programs</td>
<td>114</td>
<td>84</td>
<td>$80,892</td>
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<th>Requests Submitted</th>
<th>Proposals Awarded</th>
<th>Award Amount</th>
</tr>
</thead>
<tbody>
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<td>5</td>
<td>3</td>
<td>$1,500</td>
</tr>
<tr>
<td>Research</td>
<td>24</td>
<td>10</td>
<td>$4,965</td>
</tr>
<tr>
<td>Hollis</td>
<td>20</td>
<td>14</td>
<td>$6,630</td>
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<tr>
<td>Travel Support for Professional Meetings</td>
<td>89</td>
<td>81</td>
<td>$8,875</td>
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<td>Total</td>
<td>138</td>
<td>108</td>
<td>$19,970</td>
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<table>
<thead>
<tr>
<th>Undergraduate Student Programs</th>
<th>Requests Submitted</th>
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<td>$900</td>
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<td>Travel Support for Professional Meetings</td>
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<td>30</td>
<td>$2,175</td>
</tr>
<tr>
<td>Total</td>
<td>53</td>
<td>40</td>
<td>$5,175</td>
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</table>

| Total Student Programs        | 191                | 148               | $25,145      |
| Total Internal Grants         | 305                | 232               | $305,737     |

<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Project Title</th>
<th>Income</th>
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<tbody>
<tr>
<td>Michael O’Hara, Judith Sebesta</td>
<td>Explore Theatre: A backstage Pass - DVD</td>
<td>$22,003.70</td>
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<tr>
<td>Teresa Matlock</td>
<td>Child Care Collection, LLC</td>
<td>$951.94</td>
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<tr>
<td>Hans Sturm</td>
<td>The Art of the Left Hand</td>
<td>$470.00</td>
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<tr>
<td>Hans Sturm</td>
<td>The Art of the Bow</td>
<td>$420.00</td>
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<tr>
<td>Hans P. Kellogg</td>
<td>Legacies of Perfection</td>
<td>$195.21</td>
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<tr>
<td>Linda Siktberg, Ann (Burford) Bilodeau</td>
<td>Safe Swallowing</td>
<td>$39.95</td>
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<table>
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<tr>
<th>Author(s)</th>
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<tbody>
<tr>
<td>Eric Lassister</td>
<td>Kiowa Hymns</td>
<td>$187.63</td>
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<tr>
<th>Author(s)</th>
<th>Project Title</th>
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<tbody>
<tr>
<td>Ronald Morris</td>
<td>Crossroad Connect - Indiana 4th Grade Textbook</td>
<td>$13,904.48</td>
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<tr>
<td>Janet Ross</td>
<td>Understanding</td>
<td>$272.00</td>
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<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Project Title</th>
<th>Income</th>
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</thead>
<tbody>
<tr>
<td>Mike Goldsby, Rob Mathews</td>
<td>Entrepreneurship Curriculum Licenses</td>
<td>$40,141.18</td>
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<tr>
<td>Dayna Thompson, Monique Gabb, Ron Kaitchuck</td>
<td>Halloween: Celestial Origins</td>
<td>$5,700.00</td>
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<td>Dayna Thompson, Monique Gabb, Ron Kaitchuck</td>
<td>Saturn &amp; Beyond</td>
<td>$63.60</td>
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</table>
The Association of Public and Land-grant Universities has named Ball State the winner of the 2018 C. Peter Magrath Community Engagement Scholarship Award in recognition of the success of our Schools Within the Context of the Community program. During this annual 16-week immersive learning experience, 20 elementary education majors spend their days teaching and learning in a low-income, predominantly African-American neighborhood in Muncie. They learn about children’s lives outside school, which helps them meet their students’ needs in the classroom.