

forward

IOWA STATE UNIVERSITY FOUNDATION

The best-case scenario
**DISASTER
HANDBOOK**

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The best-case scenario
**DISASTER
HANDBOOK**

Story by
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Cat O'Neil

No one likes to contemplate a disaster befalling one's home, farm or community. Fortunately, Iowa State's experts across campus are working on solutions that will help us all prepare for, prevent, mitigate and recover from disasters – whether natural, technological or biological – and are often bolstered by philanthropy.

FORCES OF NATURE

AS AN EF3 TORNADO ripped through Marshalltown, Iowa, last summer, it seemed to produce randomly located damage. That's the way it often seems with a tornado. While one house loses its second floor, its neighbor loses a few shingles. Luck? Not necessarily, according to data gathered by a group of collaborative Iowa State researchers.

The researchers are part of the Hazard Mitigation and Community Resilience (HMCR) program led by Sri Sritharan, Wilkinson Chair in Interdisciplinary Engineering. Established in 2017 with a gift from Dr. Vilas Mujumdar, a retired engineer and program director for the National Science Foundation, the program's goal is to help bolster community resilience to natural disasters through better preparedness and mitigating existing vulnerabilities.

"This kind of interdisciplinary research, with the main focus on community resilience, has never been done before," Sritharan says. "Our ultimate goal is to facilitate development of plans that allow whole communities to bounce back faster from disaster."

The Marshalltown tornado research, conducted by Iowa State faculty and students in community and regional planning and civil and structural engineering, began with a survey of 660 damaged houses to determine patterns and results of tornado impact.

"Our survey showed that pre-existing conditions along socio-economic and structural lines helped determine degree of damage," says Sara Hamideh, assistant professor of community and regional planning. "Damage was not random."

That is, homes with better maintenance histories tended to suffer less damage than homes that had received less care. This fault line also correlated to social factors, including occupant education, language spoken at home and income level.

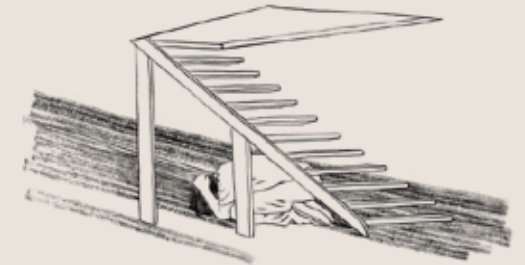
Sritharan says once such vulnerabilities are identified, they can be addressed in multiple ways, from upgrading municipal codes to providing financial assistance.

A community located on a flood plain provides an example.

"We would have an asset manager doing evacuation planning," Sritharan explains. "A structural engineer would evaluate the bridges to be used during evacuation. Experts in mass communication, supply chain, decision sciences and sociology would also be part of the planning process."

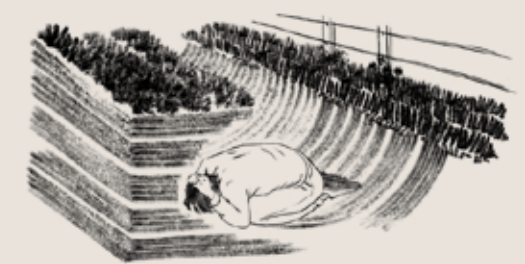
Sritharan says students who work in the HMCR program – he is hoping to develop a formal graduate degree program from diverse academic backgrounds – will gain an enlarged perspective through the collaboration, global thinking and holistic planning required for such scenarios.

TORNADO APPROACHING?



Keep safe indoors:

- 1** Go to the interior part of a basement and cover your body with a blanket.
- 2** If there is no basement, use an inside room on the lowest floor.
- 3** Avoid windows, which could break due to strong winds.



Keep safe outdoors:

- 1** Lie flat in the nearest ditch and shield your head with your hands.
- 2** Don't get into or under any vehicle, no matter its size.
- 3** Don't get under an overpass or bridge; you are safer in a low, flat location.
- 4** Don't try to outrun a tornado in your car.

NATURAL DISASTERS' ECONOMIC TOLL

During 2018, the U.S. experienced an active year of billion-dollar disaster events, including the fourth highest total number of events, behind only 2017, 2011 and 2016. In 2018, the U.S. also experienced the fourth highest total costs (\$91 billion), behind only 2017, 2005 and 2012.



THE POWER IS WITH US

JUST BEFORE CHRISTMAS 2015, a massive attack on Ukraine's power grid left 225,000 people in the cold and dark. The hackers, reportedly aligned with the Russian government, used software vulnerabilities, stolen credentials and sophisticated malware to mount their attack on the cyber network that controlled the physical grid. The people of the Ukraine were completely unprepared for what hit them.

In fact, the entire world is vulnerable. Dependent as we are upon a ready supply of electricity to power everything from homes to hospitals, a successful attack could grind any operation to a jarring halt.

"The question becomes how to keep people alive," says Doug Jacobson, Iowa State professor of electrical and computer engineering.

It's no wonder grid cybersecurity has become a top national priority.

It's a top priority for Iowa State's cybersecurity program, as well. Jacobson and Manimaran Govindarasu, the Mehl Computer Engineering Professor, lead studies to develop practical technologies, processes and the skilled workforce needed to respond to the urgent need.

"We use a holistic approach, working with utilities and municipalities toward prevention, detection and mitigation," Govindarasu says.

Prevention efforts focus on designing resilience into a power system, allowing it to withstand an attack. One area of investigation concerns utilizing a "moving target" concept that will make the grid harder to hit.

MICROGRIDS TO THE RESCUE

Relying on the sun for electricity does more than run your lights with renewable energy. It might protect you from power outages caused by everything from severe storms to cyber-attacks.

By installing solar panels on your roof and collecting the energy in a large battery, you can "island" yourself – power yourself off the grid – in an emergency.

"A microgrid enhances power reliability and resilience," explains Zhaoyu Wang, Harpole-Pentair Assistant Professor in the electrical and computer engineering department. "A microgrid can be disconnected and operated in the islanded mode to provide continuous power supply to its customers. It's particularly helpful for critical infrastructure such as hospitals, police stations, government buildings and essential manufacturing industry campuses."

Detection focuses on identifying and investigating fluctuations in the grid as unexpected activity occurs. "The goal is to shorten the detection-to-mitigation loop," Jacobson notes.

Once detected, mitigation must begin immediately. To help small power companies and communities practice mitigation efforts, Iowa State is developing the PowerCyber testbed, a customizable simulated environment complete with a mini cyber-powered electrical grid and Internet access.

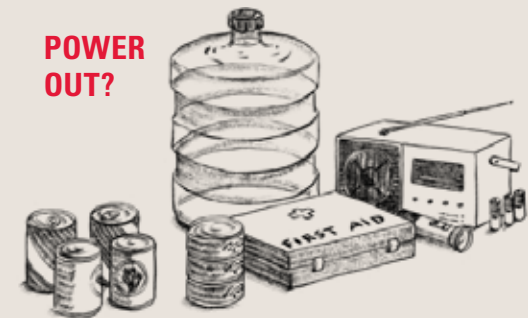
"PowerCyber allows us to run attacks and watch them progress on screen," Govindarasu says. "It allows us to prepare and learn mitigation strategies."

Communities are benefitting from Iowa State-led tabletop exercises, as well.

"They are similar to hospital preparedness exercises for disaster," Jacobson says. "Utilities and other critical infrastructure representatives like grocers, gas station operators and medical personnel participate. They work on questions like, if the power is out, how can we pump gas and keep food safe?"

For now, the questions outweigh definitive answers. But thanks to Iowa State cybersecurity faculty and students, those questions are in good hands.

POWER OUT?



Be prepared for 3-5 days:

- 1 Stock an emergency kit with flashlights, first-aid kit, battery-powered radio, extra batteries, necessary medications and emergency contact numbers
- 2 One gallon of water per person per day
- 3 Non-perishable foods

Stay safe:

- 1 Turn off electrical lights and appliances to reduce hazardous surge when power is restored.
- 2 Keep refrigerator and freezer closed. Once power is restored, discard all food with a temperature above 40 degrees.
- 3 Listen to your battery-powered radio for up-to-the-minute information, including whether your water is safe to drink.
- 4 If you must drive, go slow! Traffic lights may not be working.



THE BIOTHRREATS AMONG US

Highly Pathogenic Avian Influenza (HPAI) flew into the U.S. on the wings of migrating waterfowl in the fall of 2014. By the following spring, more than 50 million turkeys and chickens had died from the disease or were killed to stem the virus's tide. The USDA calls it "arguably the most significant animal health event in U.S. history."

It could have been much worse. Thanks to a USDA-funded plan that had been developed to respond to such a scenario by public officials, the poultry industry and the Iowa State-based Center for Food Security and Public Health (CFSPH), many farmers and healthy flocks were spared, and millions of eggs were certified disease-free and shipped to market.

Since then, CFSPH – designated as a World Organization for Animal Health Collaborating Centre – has worked with state and national agencies to enhance secure food supply plans for poultry, milk, pork and beef producers facing outbreaks of diseases such as foot and mouth, classical swine fever and African swine fever. The plans are designed to avoid interruptions of operations wherever possible.

"Our goal is to help producers protect their herds," says CFSPH veterinary specialist Pam Zaabel. "Iowa State veterinarians have been holding meetings across the state with livestock producers to raise awareness of how to prepare for a trade-limiting animal disease."

Veterinarian education is also critical. CFSPH Director James Roth, Distinguished Professor and Iowa State University President's Chair in Veterinary Microbiology and Preventive Medicine, says the CFSPH has developed online educational curricula for veterinary students and veterinarians.

"U.S. veterinarians weren't getting uniform education on emerging and exotic diseases, so we created online classes that are now required for accreditation," Roth says.

The classes are being adopted internationally, as well, and just in time.

"African Swine Fever is now in China, which raises half the pigs in the world," Roth says. "We will be starting classes in Cambodia, which just identified its first case in spring 2019. Teaching vets to recognize signs will help slow or stop disease spread over time." ■

PANDEMIC AFTER-EFFECTS

Although human beings are susceptible to some animal-borne influenzas, the major impact of future disease outbreaks is likely to be economic. Iowa alone suffered a \$1.2 billion loss from avian influenza in 2015, in unrecoverable income, jobs, wages and taxes. The trickle-down impacts to transportation companies, feed suppliers, processors and others are inestimable.

FOOD RECALL?

For people:

- 1 Stay informed in the news and online at www.recalls.gov.
- 2 Check recall details to see if your food is involved, and if so, what to do with the recalled product.
- 3 Do not eat recalled food!
- 4 Do not open the food package or container, as it can potentially release toxins into your home.
- 5 If you become ill, contact your doctor. Clearly identify and freeze any leftover recalled food. Save all packaging materials and receipts.

For pets:

- 1 Follow the same recall protocol as for your family.
- 2 Do not feed the material to your pets, even if you believe the recall to be precautionary.
- 3 Reduce your own chance of illness: After handling any pet food or treats, wash your hands for 20 seconds with hot water and soap.

GIFTS *at* WORK

EXTENDING IOWA STATE'S IMPACT THROUGH PHILANTHROPIC GIVING



➔ Flocking to the Goldfinch

Tucked into a corner of Stephens Auditorium's ground floor is the Goldfinch Room, an intimate listening room for performances by Iowa singer-songwriters made possible in part by donors.

Photo: Ed Laub

ON THE WAY TO THEIR FOREVER HOME

The community outreach program in the College of Veterinary Medicine benefits not only veterinary students, but also participating shelters and the animals themselves.

By Susan Flansburg | Photo by Dave Gieseke



➤ Operation nine lives

Veterinary students gained valuable surgical experience at a spay/neuter clinic this spring for shelter cats.

NO ONE LOVES Iowa State's Veterinary Medicine Surgery, Anesthesia and Community Outreach program more than the pets themselves. It's not only saving their lives; the program is helping make those lives worth living.

Take the case of three Chihuahuas: Margarita, Fajita and Tamale. Mom and sons entered the shelter system in 2018 in Charles City, Iowa, given up by an older couple whose health was failing. The small humane society – one of approximately 30 served by Iowa State's program – delivered the dogs to the college's outreach program. Margarita wouldn't make eye contact. Fajita snapped and snarled. Tamale was even more aggressive.

"The students realized the dogs were scared and needed TLC," says Dr. Joyce Carnevale, assistant clinical professor of veterinary clinical sciences and program coordinator. "We used low-stress handling techniques and behavior modification to decrease their fear and anxiety. They made great strides throughout their stay."

Behavior modification is just one of many services the program provides. Over the course of a pet's typical five-day stay, it will be evaluated, vaccinated and treated for everything from parasites to respiratory infections. It will be spayed or neutered. By the time the pet returns to the shelter, it will be adoption-ready.

"The donor-funded program serves shelters that don't have a veterinarian on staff," Carnevale says. "Since it began in 2016, we have treated approximately 1,800 pets. Over 95 percent of them have been adopted shortly after return to the shelter, largely because they have received comprehensive veterinary care."

The second- and third-year students who staff the program say it's a



➤ Shelter pets' best friends

The Community Outreach program in the College of Veterinary Medicine relies on donor support to carry out the operations of outreach activities for the program, foremost being student education and the associated educational activities in shelter medicine.

Donors have funded scholarships for students who, as members of the Feral Cat Alliance or the student chapter of the Association of Shelter Veterinarians, are pursuing shelter medicine. Other donors provide support for training veterinary students in spay and neuter techniques, as well as dental procedures.

And in a way, the animals themselves are beneficiaries of donor support: Like Dr. Carnevale, many students adopt the pets for whom they've provided care throughout their stay in the veterinary hospital at Iowa State.

win-win. "Not only do we get to help the animals, we learn more skills," third-year student Stefanie Hurt says. Those skills run the gamut of small animal veterinary practice, from intake and labs to physical exams and surgery – skills that also characterize shelter medicine, which has been recognized as a veterinary specialty.

"Behavior problems and infectious diseases are common issues in shelters, as is funding of care," Carnevale says. "Discovering cost effective, efficient and humane processes to deliver care is a constant goal."

The urgent need for shelter medicine has come on the heels of changing attitudes toward companion animals, Carnevale says. "There has been a shift in the value placed on them. People are increasingly willing to support welfare organizations with volunteer time and financial resources. The goal is to allow owners to keep their pets rather than surrender them for health and/or financial issues. Training veterinarians to serve this vulnerable population has been identified as a need."

Students say it is a tremendously rewarding program. "We are making a difference in pets' and people's lives," third-year student Lawton Herbert says. "That makes me very happy."

Philanthropy provides critical funding for programs like Iowa State's. "We could not run the program without donors," Carnevale says. "They allow us to offer services to the shelters at no charge."

As for the Chihuahuas, the brothers ended up being adopted by members of the same family. Margarita's fate was just as happy.

"She joined my fur family," Carnevale says. "She is now completely settled into the family, bossing the big dogs, stealing the pillows and wearing her favorite cardinal and gold jacket." ■

BANKING ON THE FUTURE

According to Kingland MBA Professor James Brown, people who grow up without access to financial institutions face lifelong disadvantages.

By Steve Sullivan | Photo by Paul Gates



» Building blocks

James Brown's research highlights the importance of brick-and-mortar banks on future financial health.

JAMES BROWN REMEMBERS walking with his dad from their home in Wingo, Kentucky, to the bank across the street and opening his first savings account.

He was about 10 at the time, living in a town of barely 800 people. Brown, Kingland MBA Professor and chair of the department of finance in Iowa State's Ivy College of Business, knows how lucky he was.

His research, published in the Journal of Financial Economics and enhanced by his named professorship, details how growing up in a community with banks leads to greater financial literacy and trust in financial institutions. Growing up in a "financial desert," conversely, correlates to having lower credit scores and more delinquent accounts later in life.

"This exposure, or lack of it, shapes the way we learn about money and how to handle money over time," Brown says. "Ultimately, it can exacerbate the gaps in society. You could be lifelong behind the curve in the way you get credit, pay for credit and obtain loans, as well as the rate you pay for those loans."

Native American reservations provided Brown and his colleagues a unique research opportunity. Federal legislation in the 1950s resulted in many reservations being under state court jurisdiction, while others remained under tribal courts. Reservations under state court jurisdiction typically had more financial institutions, likely because state court systems are more consistent in management of legal matters involving banking, such as loan contracts.

Using consumer finance data from the Federal Reserve Bank of New York Consumer Credit Panel and surveys of Native Americans who grew up on reservations, Brown found that those who lacked access to banks had more markedly problematic personal finance



» Taking credit

For borrowers who grow up without banks or financial institutions, the effect on their financial future is lasting and difficult to overcome:

20%

LESS LIKELY
to have a credit report

7 to 10

POINTS LOWER
credit scores

2 to 4

PERCENT HIGHER
delinquency rates

Similar effect to reducing
ANNUAL INCOME BY
\$6,000

Moving to a community with stronger financial markets partly offsets these effects. However, it still takes about 17 years to overcome the negative effect on credit scores and 12 years to reduce delinquency rates.

histories than those who had access.

"These things matter, and matter beyond Native American populations. Where you grow up can impact how you build and manage credit," he says. "We lose something when that brick-and-mortar bank isn't there."

When traditional financial institutions are not available, Brown noted, less traditional ones fill the void: pawn shops, check-cashing outlets and payday lenders. In fact, 12 million Americans a year turn to payday lenders.

Rural communities and majority-minority communities have long faced this issue, but the problem is not exclusive to such areas. In fact, economic downturns, consolidations and competitive pressures have resulted in more than 2,000 banks closing since 2012. Few new banks have opened. Moving to a community with more financial institutions can help, but it can still take decades to overcome the negative effect of growing up without a bank, Brown says.

"Policy is hard, but our findings speak in a broad sense to the benefits of robust and dispersed financial institutions and not hindering the growth of the financial sector."

Ultimately, financial education may be the most valuable solution.

Brown's study found that mandated personal finance education can offset the negative effect of not growing up in a community with financial institutions. As of 2018, only 17 states require high school students to take a personal finance course. Iowa recently added a personal finance requirement.

"There is strong evidence that programs like these can have positive effects, particularly for students who are not exposed to finance in other ways," Brown says. ■

IMPACT

A decade of difference

For 10 years, the Raisbeck Endowed Dean's Chair in the Ivy College of Business has been instrumental in enhancing the reputation of the college and Iowa State overall through:

3

DEAN'S CHAIR HOLDERS

building on success – former Dean Labh Hira, former Interim Dean Michael Crum and current Dean David Spalding



Stars align for accessibility

Few places on the Iowa State University campus – beyond the astronomy department – have seen as many stars as Stephens Auditorium, which has hosted close to 10,000 performances and events since its opening in 1969.

When the auditorium was built five decades ago, the architects did not have in mind today's idea of inclusive design – ensuring that facilities offer a welcoming physical environment for everyone. Now, certain aspects of the facility, like the location of restrooms and large number of steps, can be a hindrance for some people; in recent patron surveys, more than 50 percent of respondees mention the lack of accessibility to restrooms as problematic.

While advances have been made in enhancing the patron experience, Stephens is raising funds for several remaining projects, including a restroom addition, restroom upgrades and lighted handrails. Gifts from generous donors can help make the auditorium easier and safer to navigate – and ensure Stephens continues to fulfill its mission to keep the arts accessible to all.

▶ **LEARN MORE** at www.center.iastate.edu/makeagift.

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FACULTY MEMBERS'

teaching and research efforts enriched by support from Raisbeck funds

1,000s

OF STUDENTS' education impacted; today, the college is enrolling record numbers of students, with an increase of nearly 26 percent in just the past five years.

IMPACT

Supporting students across borders

Putting science, technology and human creativity to work is at Tom Brumm's core. This past year, Brumm, the Mary and Charles Sukup Global Professor in Food Security, funded senior design projects for three agricultural engineering students at Makerere University in Kampala, Uganda. One of the projects was completed by **Ismael Mayanja**, a Makerere University student who also interned at Iowa State for six weeks with support from the Sukup Global Professorship – an experience that provided him an opportunity to broaden his knowledge across borders. For his project, Mayanja designed a pedal-powered grain cleaner that is now being used to clean maize at the schools in the Iowa State–Uganda program.

The other two student projects are a portable grain dryer and an amaranth threshing machine. "These projects solve problems encountered by the ISU–Uganda program and provide valuable training and experience for the next generation of engineers in Uganda addressing food security issues," Brumm says. "While my research and personal efforts in Uganda's Kamuli District can assist in providing food security, these professionals will be the leaders in implementing solutions that will ultimately make a difference."



Ismael Mayanja

(below) Thomas Buyinza, post-harvest technology specialist for the ISU–Uganda program, shows a group of primary school students and teachers how to use the pedal-powered grain cleaner.



Taking flight

It's not every day that an Iowa State student is appointed by the state's governor to be part of an important educational initiative in the state. **Kwizera Imani**, a senior in aerospace engineering, experienced just that.

Governor Kim Reynolds nominated Imani to the advisory board for the Iowa Clearinghouse for Work-Based Learning, a group charged with expanding high-quality, experiential learning experiences for K-12 students. In his role on the board, Imani, an MVP Scholar and recipient of the Bright Scholars of Iowa Award, hopes to bridge the gap between policymakers and the students affected by the policy.

In addition to continuing his work in the education system to "provide a path for underrepresented communities to find careers," Imani is interning with Collins Aerospace for the third time this summer, this year in the military rotary wing department. The diverse internship experience he's had with the company is an asset to his work on the advisory board and is helping him prepare for a successful engineering career in the aerospace industry.



NOTABLE QUOTES



"I'm just a girl from a small town in Iowa, so it's pretty crazy to be one of the top fashion students in the nation. The department of apparel, merchandising and design has helped me prepare for my future in so many ways. The faculty are some of the most inspiring, hardworking people I've ever met, and I can't wait to be successful in my career so that I can give back to Iowa State."

— **Jenny Junker**, a May 2019 Iowa State graduate in apparel, merchandising and design from Van Meter, Iowa, who took home the highest honor at the YMA gala in New York City this past January – a \$35,000 scholarship from the YMA Fashion Scholarship Fund. To receive the award, Junker had to compete in an industry case study focused on globalization and present on her findings to the YMA Fashion Scholarship Fund Board of Governors. She credits Iowa State faculty with preparing her for her presentation.

While at Iowa State, Junker received numerous scholarships, including the Mark Ballard Entrepreneurial Scholarship. She currently is a location planning analyst with Ross Stores in New York City, with the goal of someday starting her own company.

"My father told me a long time ago that giving is a learned trait; you have to keep doing it and practicing it just like any other thing you want to be good at. However, there are certain situations where the gift isn't so much the money that's given, but the leadership that's provided in terms of encouraging other people to support very important people doing very important work."

— **Gage Kent**, chairman of the board of directors and CEO of Kent Corporation. A gift from the Kent Corporation Charitable Foundation recently established the Kent Corporation Chair in Business in the Ivy College of Business. The inaugural recipient is Paul Koch, a professor of finance, who is an esteemed researcher in the finance field.



"Getting to play at Carnegie Hall was better than I could ever have imagined. Thinking about the history of the stage and who had performed there during the performance was truly inspiring as a musician. Not many people get to play in Carnegie Hall, and so to be able to do that was a milestone in my life."

— **Brena O'Donoghue**, a senior in biology and recipient of the Doris Riehm Music Scholarship, who performed clarinet at Carnegie Hall in New York City this past April with the Iowa State University Symphony Orchestra and ISU Choirs for the Gotham SINGS! Collegiate Showcase.



ACCOLADES

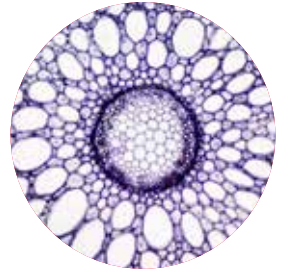
Distinguished by devotion

In April, the Iowa State University Foundation and the Iowa State University Alumni Association recognized the outstanding contributions of alumni and friends of Iowa State University with its most prestigious honors during the annual Distinguished Awards Celebration.



(l. to r.) Row 1: Larissa Holtmyer Jones, president and CEO, Iowa State University Foundation; Tahira K. Hira, Honorary Alumni Award; Martha Robes, Order of the Knoll Campanile Award; Dr. DeRionne P. Pollard, Distinguished Alumni Award; Gary L. Griswold, Distinguished Alumni Award; Marianne Spalding, Order of the Knoll Faculty and Staff Award; Beverly Madden, Order of the Knoll Cardinal and Gold Award; Wendy Wintersteen, president, Iowa State University

Row 2: Jonathan Rich, Distinguished Alumni Award; Labh S. Hira, Honorary Alumni Award; Dana Robes, Order of the Knoll Campanile Award; Gage Kent, chairman of the board of directors and CEO, Kent Corporation, Order of the Knoll Corporation and Foundation Award; Deborah J. Ivy, Honorary Alumni Award; David Spalding, Order of the Knoll Faculty and Staff Award; Warren Madden, Order of the Knoll Cardinal and Gold Award; Jeff Johnson, Talbot Endowed President and CEO, Iowa State University Alumni Association



CRYO-MITE

The Roy J. Carver Charitable Trust of Muscatine, Iowa, has committed more than \$3.5 million to transform biomolecular research at Iowa State University.

The Carver Trust grant will enable the purchase of a state-of-the-art cryo-transmission electron microscope equipped with a direct electron detector. Cryo-EM technology can break down barriers in treating disease, engineer sophisticated biobased materials and improve and sustain our food supply.

The concentration of cryo-EM expertise and technology at Iowa State will be one of a kind in the state of Iowa, making it a leader in advanced electron microscopy technology.



RIDING INTO A BRIGHT FUTURE

By Karol Crosbie
Photo: Paul Gates

Whether putting the pedal to the metal or tracing down the building blocks of superconductors, chemistry graduate Brennan McBride is in the zone and on the move.

Brennan McBride has developed both the muscles and mind-set for excellent navigation – whether on Iowa’s byways or Iowa State’s pathways to academic success. A May graduate in chemistry, McBride has biked more than 4,000 miles in the world’s largest cross-country bike tour. On campus, he felt so strongly about the value of steering his own future with hands-on research that he was an ambassador for undergraduate research with the University Honors Program. McBride, who grew up in Altoona, Iowa, was a recipient of the Jonathan and Susan Rich Undergraduate Research Scholarship.

Tell us about biking in RAGBRAI (*Register’s Annual Bike Ride Across Iowa*) **for nine years.** When I was 12 years old, my dad and I thought RAGBRAI would be fun to do together, so I climbed onto my grandfather’s 1980 Trek, and it was fun, and we’ve been doing it ever since. I’m a member of Team Lemonade – actually, I’m the team’s mechanic.

How did that happen? I started working at a bike shop in Altoona when I was 15. I was a shy kid when I started, so first I was trained to just build bikes. Then I moved on to making repairs, which meant more customer interaction, and then I moved to sales. So I can be pretty useful. Sometimes I talk to people who say they’re

intimidated by RAGBRAI, and I tell them, “If you can stay on a bike for more than 30 minutes, then you can make it to the end.”

Tell us what prompted you to pursue chemistry and how you navigated the experience at Iowa State?

My dad is a chemist. He did his pre-pharmaceutical coursework at Iowa State. I didn’t begin working in Professor Kirill Kovnir’s research laboratory until the spring semester of my junior year, and if there’s anything I’d do differently it would be to have done this sooner. In fact, when I was an ambassador with the Honors Program, my message to all students was: Research is an amazing learning experience and is out there for any major. Everyone should try it.

What’s around the next bend in the road for you?

I’ll be attending graduate school at Colorado State this fall. After that, whether I stay in academia or go into industry, research will be a part of my future in some way.

And how about RAGBRAI?

Well, I don’t know if I’ll be able to get away. But wherever I am, I’ll bike!

WAYS TO GIVE

➔ The Iowa State University Foundation can help you give a gift that moves lives forward.

Mette Lundsgaard



“When I retired in 2014, I knew I wanted to give back to Iowa State. What was important to me? STEM education and women’s empowerment within STEM. It’s just so important to help young women and girls see the opportunities for them in math and science. Remove the barriers, and they’ll change the world.”

- METTE LUNDSGAARD, class of 1981, electrical engineering. The ISU Foundation worked with Lundsgaard to achieve her goals through establishing scholarships in her name for students in electrical and mechanical engineering and a scholarship with her family in the names of her grandparents, Emil and Mabel Lundsgaard, to support students from Cherokee County. She also established travel funds for students in Women in Science and Engineering and in Engineers Without Borders going overseas to work and study in Africa, Latin America, developing Asia and the Middle East. Lundsgaard serves on the ISU Foundation Women & Philanthropy Committee and has held a lifetime membership in the ISU Alumni Association since 1981.

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Iowa State University Foundation

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Forever True Week

From writing thank you notes to donors to sharing why they're "Forever True" and learning how philanthropy impacts nearly every corner of Iowa State's campus, students helped make our annual Forever True Week event, held this past April, a success. A special performance by the ISU Marching Band was the icing on the cake.



Forward

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