

forward

IOWA STATE UNIVERSITY FOUNDATION



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How do we *ensure* we
GRADUATE
the *future* Cyclones the world will *need*?

THE BIG PICTURE

Till we all meet again

While this year's commencement was held virtually, thousands of future Cyclones will once again cross the stage in Hilton Coliseum, just like December graduate **Olivia Chiodo** and her late mother, Lisa O'Hern Chiodo.

Photo by Dan McClanahan



“Dad, I’m not sure what to do.”

Olivia Chiodo remembers the conversation perfectly. She had called her father, David, a police officer in Des Moines, to let him know she needed help paying her outstanding tuition bill.

He paused before he answered. *“I’m not sure either.”*

Olivia was stunned. Scheduled to graduate from Iowa State in a few months, she knew if she couldn’t pay her tuition, she wouldn’t be allowed to graduate. Her younger brother Xavier, an Iowa State sophomore, might not be able to register for classes.

It was a one-two punch for them. Their mother, Lisa, had just died, leaving the family to grieve even as they struggled to cover the medical bills that had piled up. Funeral expenses added to the burden.

Now, money for school was simply... **GONE.**

Ensuring we graduate
the *future* Cyclones the
world will need

Story by Susan Flansburg

THE BIG PICTURE

Surrounded by support

Standing with **Trevor Eder-Zdechlik** (center) all the way are mom Jody Eder-Zdechlik, siblings Bria, Allison, Zach and Haley Eder-Zdechlik, and dad Bob Zdechlik.



Photo by Paul Gates

THE CHIODO SIBLINGS ARE NOT ALONE, nationally or at Iowa State. When financial stress leads college students to leave school, it contributes to a growing societal risk: the loss of a generation of untapped human potential at a time when we can least afford it.

The challenge is multifold. So are the solutions – and it will take all of them if we're to graduate the future Cyclones the world will need.

The workforce risk

Today, America faces an unprecedented skilled labor shortage. According to the Department of Labor, as of October 2019, the U.S. economy had 7.3 million job openings – 65 percent

➔ A skilled workforce cliff

In 2020
1.4 MILLION
SHORTFALL



By 2030
11 MILLION
SHORTFALL

of which require postsecondary education in areas ranging from healthcare to technology.

Combined with a looming dip in college enrollment during this decade – along with new uncertainties that the pandemic and resulting worldwide recession present, as well as trends toward online instruction and declining international enrollment – the future looks even more grim. At the current rate the United States is producing college graduates, the country is expected to face a shortfall of 11 million skilled workers to fill those jobs over the next 10 years, according to a study by Georgetown University's Center on Education and the Workforce. In Iowa, the center

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As I entered ninth grade, I was confronted
with a battle that showed me that
LIFE IS NOT ALWAYS GOING TO BE EASY.

I was diagnosed with leukemia.
My parents remained strong and found a way
to try to pay off the hospital expenses.
They also have four other kids.
My youngest sister is still in high school.

FINANCES HAVE BEEN A CHALLENGE FOR ME.

I've worked every semester that I've attended Iowa State
as well as during the summers.
My mom contacted Tara in the Office of Student Financial Aid for me.
I was sitting at my desk when Tara emailed me to come see her.
I dropped everything and literally ran to her office.
She said I qualified for a grant.
I WAS SPEECHLESS.
Thanks to the Douglas and Debra Troxel Award,
I now have what I need to stay in school.

Trevor Eder-Zdechlik,
junior, kinesiology and health

”

projects that by 2025, 68 percent of jobs will require education and training beyond high school – 3 points above the national average of 65 percent.

To ensure Iowa State students, both today and in the future, fill the workforce pipeline and fuel the economy, Iowa State is tackling this challenge from numerous sides, delivering relevant degree programs and building an ecosystem that nurtures the 21st century skills of innovation and entrepreneurship that will be needed more than ever in the future workforce.

“We’re developing degree programs with an eye toward workforce needs,” says Jonathan Wickert, senior vice president and provost at Iowa State. “New degree programs in business analytics, data analytics, actuarial science and cybersecurity are great examples. When you fold in a focus on innovation and entrepreneurship, the result is a high-quality educational experience that combines practical and critical thinking skills, and is consistent with our land-grant mission to serve our nation and world.”

At the heart of this ecosystem is the recently completed, 140,000-square-foot Student Innovation Center. Within the leading edge facility, made possible with \$40 million in state funding and more than \$44 million in donor support, students across disciplines can collaborate to pilot projects and engage in unscripted, hands-on learning.

The achievement risk

Excellent programs and facilities that enable Iowa State to compete for a

Iowa State is tackling [the workforce] challenge from numerous sides, delivering relevant degree programs and building an ecosystem that nurtures the 21st century skills of innovation and entrepreneurship that will be needed more than ever in the future workforce.

shrinking enrollment pool, however, are only part of the solution. Keeping students here is key.

The good news is, last year, Iowa State’s graduation rate outperformed similar American universities by 16 points, with the four-year graduation rate the highest ever and the average time-to-degree the lowest. Yet, while graduation rates for students in some multicultural populations set similar records, there persists a gap for historically disadvantaged or underrepresented groups, including first-generation students and those from low socioeconomic households, veterans, and ethnically diverse and non-traditional-age students.

Iowa State University President Wendy Wintersteen has made closing this “achievement gap” one of her top priorities as part of the university’s membership in the University Innovation Alliance, an 11-member organization dedicated to expanding opportunities and improving our nation’s economic potential by helping more students from all socioeconomic backgrounds graduate from our nation’s leading public research universities.

For example, to bring the six-year graduation rate for underrepresented, low-income, first-generation and multicultural students at Iowa State to within 5 percent of other students, the university would need to retain just 20 more students a year collectively from these groups to narrow the gap.

The financial risk

Students come to Iowa State with a plan for achieving their dream of earning an Iowa State education. But

if their financial need changes or an unforeseen event occurs – job loss or medical bills, either for them or their family members, even something as simple as unexpected car repairs – that dream may be lost.

Trevor Eder-Zdechlik was facing that reality. Diagnosed with chronic myelogenous leukemia in 2013, the junior from Stillwater, Minnesota, must take chemotherapy medication daily and periodically travel to Minneapolis for blood tests. He also must work to pay his bills. Last fall, those bills threatened to overwhelm him.

“My parents have struggled to help pay for me and my siblings’ college expenses,” he says.

Midway through the semester, the money saved from Trevor’s 40-hour-a-week summer job was nearly gone. His off-campus job netted nowhere near enough to cover books, rent, food and tuition. Trevor began to think about adding another job.

Financial hardships created in part by events out of anyone’s control – the Chiodos’ mom’s death, Trevor’s illness – can undermine a family’s financial solvency overnight. Director of the Financial Aid Roberta Johnson says such crises happen all the time and, without intervention, can result in students leaving Iowa State, either temporarily or permanently.

“Each story is unique,” she says. “Parents sometimes die without any life insurance, leaving students to pay for funerals. Families have been displaced by Puerto Rican hurricanes, California wildfires, western Iowa flooding. They often lose their livelihoods and can no longer help. We’ve seen them all.”



“We want to make sure all our students feel welcome, safe, included. This is the job of the entire campus. We try to meet students where they are, in multiple ways.”

Erin Baldwin,
Interim Senior Vice
President for
Student Affairs

The connection risk

For many students, their financial picture is made more precarious by a lack of preparation for navigating the university’s systems, and unintended barriers that prevent them from being effective advocates for themselves and maximizing the resources available to them. They also often have difficulty building the connections and community at Iowa State that would not only provide them with a system of support and network of resources, but would make their educational experience more meaningful and personally rewarding.

The experts will tell you that the most effective retention strategies either help prevent or successfully mitigate those feelings.

“We want to make sure all our students feel welcome, safe, included,” says Erin Baldwin, interim senior vice president for student affairs at Iowa State. “This is the job of the entire campus. We try to meet students where they are, in multiple ways.”

She says Iowa State’s top-ranked learning communities are among the most effective ways to enhance feelings of belonging. These groups form an intentionally connected cohort of shared majors, interests or demographic characteristics, giving students a place to find others like them.

“Imagine a first-generation college student who comes from a small town with a high school of maybe 100 students,” Baldwin suggests. “She walks into a lecture hall with 250 students. Her parents and friends can’t offer any encouragement because they never had the experience.

(Continued on p. 10)

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My dad died just before Christmas of my sophomore year.

We had no life insurance, no health insurance.

We didn't own our house or property. We made our living through Dad's work on the farm, raising crops and livestock.

My mom, sister and I taught swimming lessons each summer.

THERE WAS NO MONEY SET ASIDE

for higher education, but we all had the mindset to attend college.

I wrote many letters of application for scholarships.

An educational foundation accepted my application and **FUNDED MY TUITION** through the rest of that year, then continued to finance my education through graduation!

I tried to find the donor or donors who did that for me.

I sent thank you notes, my résumé and a commencement invitation, but never knew the identity of the donor.

I have been absolutely determined to give back.

**THAT ONE PHILANTHROPIC ACT
MADE ALL THE DIFFERENCE.**

Sally Rapp Beisser,

1971 B.S. elementary education,

1977 M.S. guidance and counseling, 1999 Ph.D. education

”



Ripples through time

In the walkway of Lagomarcino Hall, **Sally Rapp Beisser** can look back at the grieving young woman with few choices, knowing now she's going to make it.

Photo by Paul Gates

Nobody she knows can help her. If she's a student of color, she might also be experiencing micro-aggressions – indirect or unintended discrimination. As a member of a learning community, she can talk to her new peer friends about it.”

Learning communities have proved their worth on Iowa State's campus, with an 87.7 percent retention rate and a 75 percent six-year graduation rate. For the 13 percent who decide not to join a learning community, a university-wide coordinated care network is proving invaluable. It uses data to identify students who are showing increasing signs of stress – dropping grades or low attendance, for example – so that advisers and instructors can reach out to offer assistance.

“The system allows us to resolve minor issues before they escalate,” Baldwin says.

The ultimate gains

While certain factors contributing to the financial stress that current students face are new, for many Iowa State alumni who came from modest means or were the first in their families to attend college, the personal situations are perennial.

Sally Rapp Beisser, classes of 1971, 1977 and 1999, can relate. She was halfway through her sophomore year when her dad was diagnosed with leukemia and died in a matter of weeks. He had no insurance, and the family had no livelihood without him. Neighbors helped with crops that year.

“I decided to stay home and help my mom,” says Beisser, now the Levitt



“You never know who is going to find the cure for cancer or develop a product that helps people around the globe.”

Roberta Johnson,
Director, Office of
Student Financial Aid

Distinguished Professor of Education at Drake University. “She encouraged me to go back to Iowa State and make it work. I returned, devastated by grief, and found help through an anonymous scholarship. It wasn't a lot, but it was enough. I wouldn't have been able to complete my education without it. Along with two jobs on campus, I was able to successfully complete my undergraduate degree with honors.”

Beisser's experience foreshadowed the philosophy behind the grants that Olivia, Xavier and Trevor received. Thanks to a Cyclone Success Grant made possible by Iowa State Athletics, Olivia was able to graduate in December 2019, while Xavier, also a Cyclone Success Grant recipient, and Trevor, who received a Douglas and Deborah Troxel Award, were able to register for spring semester.

“I was overwhelmed when I received the award,” Trevor says. “It means I can stay at Iowa State. I am seriously so grateful.”

“All I could think was, I can graduate,” Olivia says. “It helped keep me on track. I'm focused on grad school now.”

Indeed, keeping students like Olivia, Xavier and Trevor in school through graduation is critical to addressing the looming workforce shortage. More important, helping all students succeed serves both the economic and greater social good.

Because, as Johnson points out, “You never know who is going to find the cure for cancer or develop a product that helps people around the globe.” ■



The legacy endures
Xavier and Olivia Chiodo
(center), with sibling
Gabrielle and dad, David,
are proud to carry on the
Cyclone tradition of their
mother, Lisa.
Photo by Dan McClanahan

“

When our parents told us Mom had stage 4 pancreatic and liver cancer,
I said, I'll stay home and help. But Mom said no.

SHE FELT EDUCATION WAS VERY IMPORTANT.

She died two years later. I came back to school,
but it was hard. My focus deteriorated.

Then I found out **WE DIDN'T HAVE THE MONEY**
to pay my or my brother's tuition. My dad had to pay the medical bills
and funeral expenses with no second income.

I went to Financial Aid for help. We got Cyclone Success Grants,
which allowed us to pay for fall 2019 tuition.

I wouldn't have been able to graduate without them.

I WISH MOM COULD HAVE BEEN THERE.

She would have loved seeing me graduate from her alma mater.
It was one of **THE GREATEST EXPERIENCES OF MY LIFE.**

Olivia Chiodo,
2019 B.S. biology

”

Grants fill the gap

When financial stressors force students to leave school, their long-term personal and professional success is also impacted, and each year of a college education can pose a unique set of financial and other challenges that can be barriers to student success.

Various types of grants can assist students throughout the continuum of their Iowa State education:



➤ SUCCESS GRANTS

help retain sophomores or juniors when their first- and second-year scholarships expire; they can be especially helpful as students enter colleges or programs with higher tuition and fees. These students often face working extra hours to the detriment of their schoolwork.



➤ COMPLETION GRANTS

help students toward the end of their college careers. These seniors – or sometimes juniors – are good candidates for graduation but have an outstanding U-bill or other expenses and have tapped out other avenues for financial aid.



➤ EMERGENCY GRANTS

fill the need at any time during a student's education when they find themselves struggling to pay bills due to an emergency that is out of their control and they have exhausted all other financial resources.

RETENTION GRANT SUPPORT OVER A STUDENT'S YEARS AT IOWA STATE



Right now, student financial need has increased significantly because of the pandemic and its resulting effect on the economy, making donor-supported success, completion and emergency grants more important than ever. Whether offered centrally through the Office of Student Financial Aid or through an individual college, retention grants can make all the difference for students in good standing who have exhausted every other resource.

And while CARES Act grants provide students some relief, many continue to struggle just to get by. The Cyclone Strong Emergency Fund is helping to fill this immediate need.

▶ **TO LEARN MORE** visit FundISU.com

"This is a very challenging time for our students, as the pandemic has caused uncertainty, financial instability and stress. But I am so proud of the ways that ISU community and the ISU Foundation have pulled together to support our students to keep them on track for graduation and to maintain the strength of the Cyclone spirit. We could not do this without your help.... Together, we will remain Cyclone Strong."

Wendy Wintersteen,
President,
Iowa State University

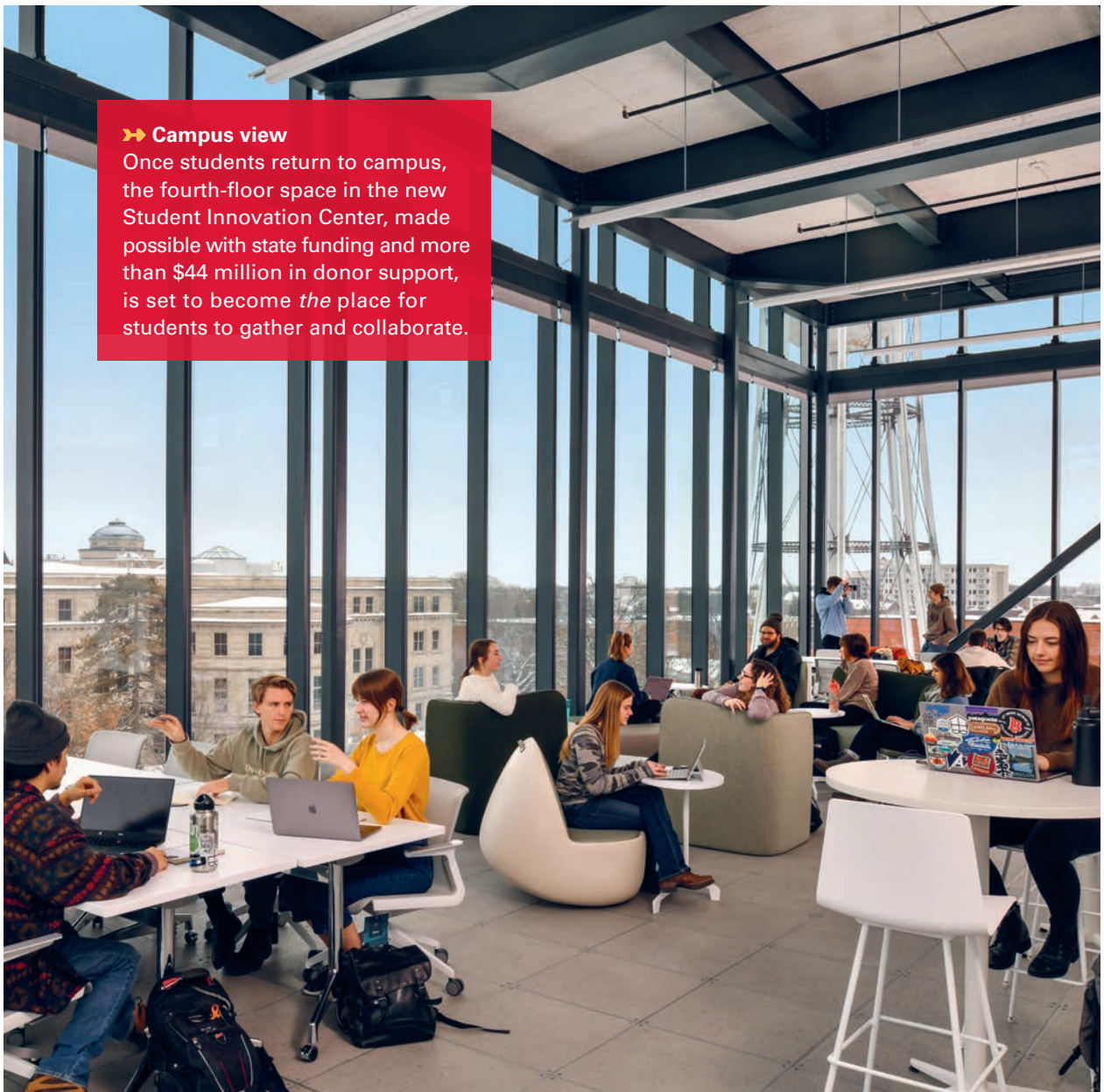


GIFTS *at* WORK

EXTENDING IOWA STATE'S IMPACT THROUGH PHILANTHROPIC GIVING

➔ **Campus view**

Once students return to campus, the fourth-floor space in the new Student Innovation Center, made possible with state funding and more than \$44 million in donor support, is set to become *the* place for students to gather and collaborate.



BOUND FOR SUCCESS

The nine-year Science Bound program requires students and their families to go all-in. Thanks to donor support, in the end, it's all worth it.

By Karol Crosbie | Photo by Paul Gates



»» **Down to a science**
Science Bound students since their mid-teens, **Daniel Arriaga** and **Iliana Castillo-Machuca** are prepared for careers in STEM.

SOMETIMES WHEN YOU'RE PLUNGING THROUGH COLLEGE LIFE, it's hard to connect with your younger self – to remember, for example, what captured your interest in eighth grade, or how you spent the summer after ninth grade.

But if you're an alumna of Science Bound, Iowa State's 29-year-old pre-college program that prepares underrepresented students to pursue careers in agriculture, science, technology and mathematics, you know exactly what you were doing.

Daniel Arriaga, a December 2019 graduate in chemical engineering, remembers his eighth grade Science Bound project. "It was about water flowing through sticks, and how a filter on the top affects the flow. I studied something like that in an electrodynamics course at Iowa State. It was still important."

Iliana Castillo-Machuca, also a recent graduate in biology, remembers the ninth-grade teacher who recommended her for Science Bound. "Mr. Benson was always a positive mentor in my life. He thought I was doing well, and he told me about Science Bound. Most students entered the program in middle school. I kind of got in at the last minute."

Science Bound's intensive five-year program integrates each student's pre-college teachers, family and Iowa State mentors into hands-on projects, summer classes, visits to campus and family meetings.

"It's not just a one-off touch point," says Science Bound Director Alexis Campbell. "It's continuous service provided by many community members."

Arriaga, who is also a musician and writer, was not short on interests in his younger days. But the Science Bound program helped him focus, he says.



➔ All in on STEM

For nearly 30 years, Science Bound has been a win-win proposition for both individual donors and companies in the Iowa communities with the program.

Marshalltown's Mary and Chris Clover's giving to Science Bound reflects a passion for STEM education and providing opportunities for underrepresented students, while Mechdyne, of which Chris is a founder, supports the program to strengthen the STEM workforce and the Marshalltown community. Likewise, Hormel Foods' recent gift to launch Science Bound in Osceola will help the families of its employees, as well as support a diverse STEM workforce.

Building diverse talent for the workforce motivated a gift from the Des Moines company Corteva Agriculture, whereas time and treasure are what Principal Financial Group's employee volunteers give Science Bound as part of that company's philanthropic culture.

▶ LEARN MORE

visit sciencebound.iastate.edu

"My family had high expectations of me. Science Bound helped me build on my interests and pushed me a lot."

Castillo-Machuca says that Science Bound communications with her family were particularly meaningful for her. Like approximately 75 percent of other Science Bound students, she is the first in her family to go to college. "Sometimes it's been difficult to explain to them what I'm doing. But they are so grateful for Science Bound."

Such a long-term, intensive program requires significant financial resources, and private support is invaluable. Many donors, both individuals and companies in the towns with Science Bound, consider their support an investment in their communities and their workforce.

That's because the program's success speaks for itself. Ninety-six percent of Science Bound students go on to college, and 74 percent graduate with an ASTEM degree. Students who attend Iowa State in an ASTEM area receive a full-tuition scholarship all four years of study. Here, they continue to benefit from programming that helps ensure their success through graduation.

And graduation from Iowa State is just the beginning for many Science Bound scholars. Arriaga is currently applying to graduate programs in chemistry, while Castillo-Machuca is applying to graduate schools in plant pathology. It's been nine years since they became part of Science Bound. How does it feel to say goodbye to a program that's been with them nearly half their lifetimes?

"Science Bound is a long program with a lot of requirements, and sometimes it can be difficult," Castillo-Machuca admits. "But in the end, finding your passion and being able to fulfill your goals is such an amazing and incredible feeling. The fulfillment is worth it." ■

As we were finishing the spring issue of Forward in mid-March, the whole world was coming to a standstill as the COVID-19 pandemic rolled across the country. Iowa State suspended in-person instruction and labs, and students and faculty studying abroad were called back home. That's when the ingenuity, inventiveness and compassion of the Iowa State community shone, as captured in the stories on these two pages.



RIVALS ON THE FOOTBALL FIELD, TEAMMATES IN THE LAB

As the shared fight against COVID-19 got underway, Iowa State University's Veterinary Diagnostic Laboratory joined forces with the State Hygienic Laboratory at the University of Iowa. The collaboration significantly increased the testing capacity of Iowa's public health and environmental lab.

"To have the opportunity to help a human testing lab in this way has been very rewarding for us," says Dr. Karen Harmon, clinical associate professor in the VDL.

Iowa State's VDL processes more than 90,000 cases a year for the state of Iowa and beyond and is considered a national leader in protecting animal and human health. This fall, construction will begin on a much needed state-of-the-art facility. The \$75 million project will be funded by Iowa Legislature appropriations, with \$11.5 million contributed by the university and donor support. Recently, the Iowa Pork Producers Association and Iowa Farm Bureau stepped up with generous gifts of \$1 million each toward this critical resource for the state and region.

PROTECTORS OF PUBLIC HEALTH

As researchers around the globe race to find prevention and treatment options for COVID-19, investigators at the Iowa State-headquartered Nanovaccine Institute are aiding their efforts by developing biodegradable nanoparticles that can deliver the medications and vaccines precisely where they are needed in the body – needle-free and with a long shelf life and room-temperature stability.

"Vaccines or therapeutics based on this technology can be safely delivered to epicenters of outbreaks while minimizing exposure for healthcare personnel and community members," says institute director Balaji Narasimhan, Anson Marston Distinguished Professor in Engineering and the Vlasta Klima Balloun Faculty Chair in Chemical and Biological Engineering. "Such approaches will significantly enhance our pandemic preparedness and potentially save lives."

A new \$7 million, state-of-the-art research facility funded with university and donor support will position the institute to be more competitive in pursuing grants and accelerating commercialization of its research.

Cyclones contribute in unforeseen ways

Cyclones are known for their inventiveness, collaboration and willingness to help whenever they are needed. Because of COVID-19, the need has never been greater. Faculty, students and other collaborators from diverse disciplines have been tackling it, creating new technology and equipment in support of people everywhere.

College of Design students in the Computation and Construction Lab responded to hospitals' need for more personal protective equipment by designing and manufacturing face shields. With material donated by Alliant Energy, the students produced the shields – which can extend the life of N95 facemasks – on 3D printers in a work rotation that maintained safe social distancing.

Iowa State computer scientists also rose to the occasion. An interdisciplinary team led by Hridesh Rajan, interim computer science department chair and the Kingland Professor of Data Analytics, created a digital library of research on coronaviruses that includes 44,000 research papers now available to scientists around the world.

Photo: Dan McClanahan



Dedicated to going the (social) distance

Just three months after being sworn in as the second-youngest woman to hold elected office in Iowa, **Rachel Junck**, a senior in chemical engineering and Ames City Councilwoman, found herself helping steer the city through a worldwide pandemic. A recipient of the Roderick Seward, Flossie Ratcliffe and Helen M. Galloway Foundation Expendable Merit Scholarship and the Engineering Student Leadership Development Scholarship, Junck is committed to helping her constituents, many of them students like her, who have been hit extra hard.

What's it been like to serve on the Ames City Council while taking classes online during the pandemic?

It's been very interesting and challenging! Keeping up with online classes, council work, and changing federal, state and local policies related to COVID-19 has taken up most of my time.

What's been your greatest academic challenge so far?

My coursework was already quite demanding, even in person. I'm so thankful for my professors, who have all been very understanding and responsive to any questions I have.

And your greatest council challenge?

Many of my constituents are Iowa State students, and I am very concerned about how this crisis is affecting them. While a lot of students have families they can rely on financially, many others do not. More broadly, I am concerned about how people left unemployed will continue to put food on the table, pay rent and other bills.

AMERICA, WE HAVE CONTACT TRACING

As the first wave of the COVID-19 pandemic recedes, how, when or even whether states and communities can reduce social distancing and reopen businesses and schools will hinge on the ability to conduct widespread infection and antibody testing, isolate those with positive diagnoses, and trace contacts so they can be tested and isolated.

This process has been used in public health for decades to contain disease outbreaks in populations. Successfully containing the current worldwide pandemic, however, lies in how rapidly we're able to scale up comprehensive contact tracing. It's a labor-intensive undertaking, since contact tracing interviews have traditionally been conducted one-on-one by trained healthcare workers.

Yet while many states have been planning ahead, hiring hundreds if not thousands of people to conduct these interviews, the reality is these efforts will not be enough.

Enter Iowa State Professor of Psychology **Christian Meissner**. Meissner is bringing his expertise in memory and recall to developing an online, self-administered cognitive contact tracing interview that will enhance health systems' ability to conduct widespread contact tracing of people diagnosed with the virus.



Christian Meissner

The online questionnaire will provide mnemonic cues that can enhance infected persons' recall of their contacts as it limits healthcare professionals' exposure to the highly contagious virus.

The time-sensitive project received a quick infusion of donor support from Wendy and Mark Stavish of Naples, Florida.

"We are incredibly grateful for Wendy and Mark's support," Meissner says. "The funds will facilitate our collaborations with health departments in large metropolitan cities as we prepare for a field assessment of this new protocol."

ACCOLADES

RECOGNIZING IOWA STATE'S MOST DISTINGUISHED

Iowa State University's 2020 Distinguished Awards Celebration this fall will honor the contributions of this year's awardees:

THE RODERICK S., FLOSSIE R., & HELEN M. GALLOWAY FOUNDATION

Order of the Knoll Corporation and Foundation Award:
Galloway Foundation

Order of the Knoll Faculty and Staff Award:
Diane and Larry McComber



Order of the Knoll Cardinal and Gold Award:
Steve Watson

Order of the Knoll Campanile Award:
Virgil Elings



Honorary Alumna Award:
Mary Jo Mentel

Honorary Alumnus Award:
Blair Van Zetten



Distinguished Alumna Award:
Kathleen Howell

Distinguished Alumnus Award:
James Linder, M.D.



Distinguished Alumnus Award:
Jack Shere, D.V.M.

How to see the future of design

After Chad Surprenant and his family took a tour of the College of Design a few summers ago, an idea was born.

Many of today's design firms have what are called VR lounges, where employees can experiment with virtual and augmented reality to help colleagues and clients better visualize, experience and understand their designs. During the tour, Surprenant – a 1993 civil engineering graduate and president and CEO of ISG, a Mankato, Minnesota-based design firm – noticed that the college's VR lab was a metal cart with a computer and headsets. To take the college to the next level would require a significant upgrade.

Surprenant and his family committed a gift to the college to transform a space on the building's third floor into a 600-square-foot collaborative environment named the Surprenant Ingenuity Lab. The lab currently houses equipment for virtual and augmented reality applications, but it is designed to be flexible for future needs. In addition, the lab provides students with opportunities to explore 3D scanning and other technologies, including gaming, since much of the VR industry so far has been focused on game development.

For Surprenant, the lab is an extension of ISG's efforts to get students interested in design and explore the possibilities available through technology.



NEWS



Above: Vinay Porandla, Obhishek Mandal, Henry Melendrez, Alyanna Subayno and Marilyn Stephanou with their architectural model
Left: Alyanna Subayno and Obhishek Mandal, seniors in architecture, present the team's project

NOMAS KNOWS NO BOUNDS

Placing at a national design competition is an accomplishment in itself, but especially so when much of the project is completed over Skype – and overseas.

A group of five College of Design students placed in the top seven in the Barbara G. Laurie Student Design Competition hosted by the National Organization of Minority Architects this past fall. The competition required students to create a mixed-income residential development that included independent senior living and affordable housing, as well as commercial, retail and community spaces. The Iowa State chapter of the National Organization of Minority Architecture Students (NOMAS) – a club that represents multicultural students within the College of Design – placed in the top seven entries from 39 schools and advanced to the second round with their conceptual project, “Learning In A Place.” The group received support from the American Institute of Architects Iowa Chapter, CMBA Architects and RDG Planning and Design to attend the competition in New York City.

The five students who worked on the project were spread across the country, and even across the globe, when coming up with their design, which is an adaptable space focused on educational opportunities for residents in the Flatbush neighborhood of Brooklyn. The team relied on Skype to communicate and collaborate about their design, proving they could work through adversity to gain national recognition.

NOTABLE QUOTE

“There are significant ongoing efforts to design vaccines against respiratory syncytial virus. While this is a very important goal, if the host immune system is not functioning at its best, vaccines don’t work as well and patients are more susceptible to infection. Vitamin A plays an important role in the immune system, but we don’t know exactly how it influences the response to respiratory infection. We believe our research will advance our understanding of the interactions between nutrition and disease, and lead to the design of better therapies for those who do acquire severe RSV, as well as better vaccines to prevent the infection in the first place.”

— Jodi McGill, an assistant professor in the department of veterinary microbiology and preventive medicine. McGill and her research group received a gift from the Roy J. Carver Charitable Trust of Muscatine, Iowa, to advance the research of the role vitamin A plays in boosting the immune system’s response to RSV, a leading cause of respiratory disease in infants and young children worldwide.



IMPACT

THE CHAIN REACTION OF PHILANTHROPY

As a scholarship recipient during her time at Iowa State, **Brittney Guidarelli**, who received her bachelor's degree in marketing in 2008 and Master of Business Administration in 2009, learned the value of giving back.

When she was a freshman, Mark and Julie Blake, who established the Mark and Julie Blake Scholarship she received, invited her to dinner, and they hit it off. Throughout college, they continued to meet up for dinners, tailgates and visits that eventually included Guidarelli's roommates,

future husband and family.

As Guidarelli started her career, the Blakes provided objective insights into issues she wrestled with, and to this day they remain valued mentors to her both personally and professionally. So it's not surprising that Guidarelli and her husband have started contributing to the Mark and Julie Blake Scholarship and made it a goal to donate to the fund at least the amount she received from it.

"The Blakes are simply inspirational, not only for their generosity, but also for how their

generosity is motivated by genuine care and a desire to improve the lives of others," says Guidarelli. "My husband and I thought that if we could give back at least what I was given, we could perpetuate that cycle for others."



Brittney Guidarelli with her husband, Jack, and their two children

Photos contributed



Angela Pavitt

The mystery of the Pavitt Professorship solved

The story behind the Angela B. Pavitt Professorship in English – a position once shrouded in mystery – continues to unfold.

A Spring 2016 *Forward* article noted that the late Dale Grosvenor, a former Iowa State professor of statistics and computer science, established the professorship through his estate in honor of Pavitt to support English-as-a-second-language research and teaching. It took some sleuthing to uncover who the professorship's namesake was. It turns out that in the summer of 1987, Pavitt was among a group of South African educators who came to the university for training in Teaching English as a Second Language, and she and Grosvenor struck up a friendship before she returned to South Africa at the end of that summer.

Upon being awarded the professorship in 2018, John Levis wanted to know what happened to Pavitt. He searched social media for more than three months and contacted people in South Africa, which led him to England, and ultimately learned that she now resides in Australia. Levis gathered from Pavitt that she is a musician, playing organ at the Catholic church she attends, and that she continues to teach ESL part time.

"Angela Pavitt represents what makes me most proud of receiving this award," says Levis. "For every person like me who is privileged by such an award, there are a thousand Angelas, rarely being honored, yet every day teaching and making a difference in their students' lives, helping them navigate a new language and culture, providing a connection to the wider culture."

IMPACT



ANYTHING YOU CAN DO, DOROTHY DID, TOO

As a female student in Iowa State's dairy science program during the early 1950s, **Dorothy Demeter** was expected to do everything the boys did, including lifting 10-gallon milk cans into the pasteurizer. Demeter graduated in 1953 as the first woman to receive a dairy science degree from Iowa State, shining a light on the potential of women to succeed in dairy foods careers.

Demeter spent her career working for her family's Kolby-Lena Cheese Company, which was eventually sold to Savencia Cheese USA. She began at the company directing quality control/product development, and later, with her husband, James, an Iowa State alumnus, grew the company into an award-winning artisanal and European-style cheesemaking operation. In 2017, Savencia launched Dorothy's Cheeses, a product line inspired by Demeter's experiences that includes Comeback Cow and Keep Dreaming soft-ripened cheese. Demeter passed away in May 2019.

In honor of Demeter, Savencia Cheese USA recently established the Dorothy Demeter-Savencia Cheese USA Undergraduate Scholarship to support students majoring in dairy or food science with consideration for females and those interested in cheesemaking.

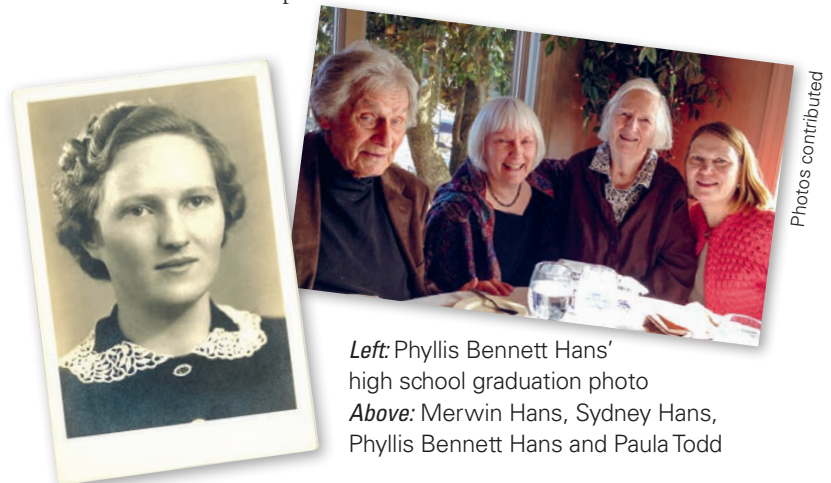
A tribute fit for a lifelong learner

Phyllis Bennett Hans grew up on a farm in Boone, Iowa, during the Depression. The Bennett family didn't have much, but her parents strongly valued education, so Phyllis and her three sisters all attended Iowa State and enrolled in the College of Home Economics. Phyllis and her older sister commuted from Boone to Ames in the family car, sharing the price of gas with other students who needed a lift. She graduated from the university in 1940 with a bachelor's degree in home economics education, receiving the highest academic honors in her graduating class.

Phyllis went on to earn a master's degree in food and nutrition at Columbia University and taught dietetics at the University of Iowa before choosing to start a family. Growing up, Phyllis' daughters, Sydney Hans and Paula Todd, along with their father, Merwin Hans – none of whom attended Iowa State – would listen to her tales of the science classes she took at Iowa State and how the university provided her with a foundation for success in the field of nutrition. Her pride for what she accomplished as a university-educated woman was evident, and her family remembers her talking about Iowa State often.

Phyllis passed away in 2017 at the age of 98, and to commemorate her educational journey and interest in the study of food and nutrition, Merwin and his daughters decided to establish a graduate scholarship at Iowa State. The Phyllis Bennett Hans Graduate Scholarship in Food Science and Human Nutrition will support students in the department who plan to work in a science- or research-related field in the future. The family discussed the idea with Phyllis just once before she passed, and she took pride in knowing the scholarship would have an impact on Iowa State students for generations to come.

Says Sydney, "It was such a transformative experience for our mother to be able to attend college – it was the most important time of her life, and we heard a lot about it. We want to honor the experience that she had, and hopefully enable other young people to have transformative experiences as well."



Left: Phyllis Bennett Hans' high school graduation photo
Above: Merwin Hans, Sydney Hans, Phyllis Bennett Hans and Paula Todd

Photos contributed

A MUSEUM-QUALITY OPPORTUNITY

If she could, Sarah Bartlett would immerse herself in museums. The Lynette L. Pohlman Museum Fellowship is enabling her to dive right in.

By Andrew Faught | Photo by Paul Gates



ACROSS THE COUNTRY, more than 35,000 museums dot the land – from nature centers and planetariums, to art museums and historical societies. If Iowa State senior Sarah Bartlett has her way, she'll visit them all. Bartlett, an anthropology, classical studies and political science major, grew up on museums and hopes to perpetuate their role as stewards of our collective heritage. And as the inaugural recipient of the Lynette L. Pohlman Museum Fellowship – named for the longtime University Museums director – Bartlett is getting that chance, in much the same way that Lori A. Jacobson, whose estate established the award, was mentored by Pohlman.

How did you develop a passion for museums?

I vividly remember the Putnam Museum growing up in the Quad Cities. My mom used to take my sister and me there, and I was so excited because they had a mummy. When I was 7, my parents took us to the Field Museum in Chicago. They had an exhibit about Egypt, and there was a big rock that was attached to a pulley system. You could pull it to see if you could move the stones, like they did to create the pyramids. We failed miserably!

It sounds like museums fire your imagination.

I recall an essay that I had to write. The topic was: If you could have any super power, what would it be and why? I wrote about traveling through time to immerse myself in the cultures of the past. I don't want to know just what the history books tell me.

How will the Pohlman Fellowship help you reach your goals?

I'm super honored to receive the Lynette L. Pohlman Museum Fellowship, especially after meeting Jason Kogan, who is the executor for his wife's estate. As a fellow, I got to curate an exhibit about Japan. This hands-on experience as an undergraduate is unheard of in the museum field.

Why do museums matter?

Museums are a way for people of all backgrounds to come and connect and learn about things. I've always loved that. Now when I'm planning vacations, I'll look for museums. I even pick vacation spots because of the museums. Luckily, I have friends who love museums as much as I do.

Illustration: Evanny Henningsen

WAYS TO GIVE



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

Ruth Harris



Gene came to Iowa State as a sophomore after serving in World War II. We were married by then, and from the moment we drove into Ames in our 1940 Hudson Coupe, we put down roots and stayed over six decades. We support Iowa State because our living came from the people of Ames and the university, and we employed many Iowa State students throughout the years. These scholarships are our way of giving back that will benefit students for years to come.

– **RUTH HARRIS**, who established two scholarships – the Eugene B. Harris Business Scholarship and the Eugene B. Harris Engineering Scholarship – to honor her late husband, Gene, a 1952 Iowa State graduate in electrical engineering. The Harris family owned and operated Harris TV and Appliance in Ames for over 60 years. At 90, Ruth, who received the 2019 Story County Alliance for Philanthropy Outstanding Philanthropist award, still attends most Cyclone football games and men’s and women’s basketball games.

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We are #CycloneStrong

COVID-19 and the economic recession have impacted all of us in some way. This global crisis is unlike anything we've ever faced. Uncertain weeks and months may lie ahead. What is certain is that many students will need extra support. Even under normal circumstances, students may live close to the edge financially.

For some, not only is this new challenge overwhelming, it may mean falling short in completing an Iowa State education – or simply meeting everyday expenses.

The Cyclone Strong Fund provides support for critical, immediate needs for Iowa State students and on campus. To make a gift toward this vital effort, please go to www.fundisu.com.

Together, we'll stand Cyclone Strong.



Forward

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