Learning and love are your best traveling companions.

forward

IOWA STATE UNIVERSITY FOUNDATION

PRACTICAL MAKES PERFECT
Necessity is the mother of invention,” the saying goes. And throughout Iowa State’s history, its people have been known for their inventive yet practical approach to any need, challenge or problem they encounter.

This ingenuity is what Forever True, For Iowa State, the comprehensive fundraising campaign to transform Iowa State, seeks to enhance and extend.

It means giving faculty and students the chance to dream without conventions and constraints.

The chance for more brainstorms raining ideas. More brick walls run up against and battered down. More false starts, and detours to redirect through along the way.

For more lightbulbs switching on and eureka! breakthroughs, and more lights-at-the-end-of-the-tunnel moments.

It means giving them the chance to change lives.

Sketches by
Recent ISU grads!

(See next page)
Cart helps deliver the goods

As told by Meghan McHugh
18 mechanical engineering

Sketchnote by Lara Hetherton
18 industrial design

Singing their way to better health

As told by Elizabeth Stegemoller
assistant professor, kinesiology

Sketchnote by Ian Baker
18 industrial design
Helping older eyes see, older hands select

As told by Chandan Kumar
graduate student in computer science

Sketchnote by Victoria Keltner
’18 industrial design

Teabag test for soil quality

As told by Marshall McDaniel
assistant professor of agronomy

Sketchnote by Carly Luft
’18 industrial design
Diagnosing disease on paper
As told by Meng Lu
assistant professor, electrical and computer engineering
Sketchnote by Samuel Au
’s 18 mechanical engineering

SHELBY

A 16 student with type 1 diabetes

THE PROBLEM
At from my friends had to make a human shield so I could unhook my pump!

SHELBY worked with apparel merchandising to design her a new dress

CRITERIA
* Match style
* Hide pump
* Hold pump

THE PROCESS

SHELBY LOVES IT! :)

THE CHALLENGE
How can we build a small sensor for biomarker detection from paper, creating the potential for early, inexpensive, and convenient detection of cancer and other diseases?

THE HURDLES
* Conventional papers fail due to structure
  * Tight, turned!

NANOPAPER
* It allows us to measure sensitive, correspond paper
  * Light interacts with the paper, tells us if biomarker is present!

EARLY SUCCESS!
* Light diffraction patterns in microstructured paper is amazing
  * Can control and optimize

THE GOAL
* Paired with a small red blood device, this technology could lead to at-home disease detection
  * This has huge benefits for areas underserved by accessible healthcare and advanced medicine!
Design thinking + old tires + elbow grease = earthquake-proof bricks
As told by Mark Ramirez
senior in architecture
Sketchnote by Ian Baker
'18 industrial design

Give a pig enough rope...
As told by Jeffrey Zimmerman
professor of veterinary diagnostic and production animal medicine
Sketchnote by Victoria Keltner
'18 industrial design
Providing a premier research and teaching environment for programs advancing crop science research is the Advanced Teaching and Research Building, supported in part by donors such as Art Engelhard, the Iowa Soybean Association, Harry and Mary Connelly, Gary Johnson and Charles E. Lyons.

Ready to try your own hand at sketchnoting? Here’s your challenge:

What are new ways to support creative problem-solving by Iowa State students and faculty?

Take a photo or scan your ideas and send them to forwardmag@foundation.iastate.edu.
A GIFT TO GO FAR

For students receiving the Liberal Arts and Sciences Dean’s High Impact Award for Study Abroad, traveling afar brings their future closer in sight.

By Lindsey Davis | Contributed photos

LUIS GONZALEZ USED TO memorize the capitals and flags of foreign countries. Growing up, whenever he saw a map, he’d ask for a copy, and one day when he watched a French movie, he was immediately captivated by the language and culture. The Iowa State junior chose to double major in political science and sociology, as well as minor in French, because “I’ve always been attracted to the political power structures that dictate what people should and should not do,” he says. “I also love seeing how societies interact and how people respond to societal change.”

As someone studying these culture-related fields, Gonzalez knew studying abroad would be crucial. But when Hurricane Maria ripped through his hometown of San Juan, Puerto Rico, in September 2017, his family was struck hard by its devastating impact, Gonzalez thought he would never get the opportunity to do so.

Then came his saving grace: the Liberal Arts and Sciences Dean’s High Impact Award for Study Abroad. Created in 2018 through the Transforming Liberal Arts and Sciences Fund – the endowed fund established through a multi-million dollar anonymous gift to the college – the scholarship enabled nearly 130 students to learn in such diverse destinations as Paris and New Zealand this past summer.

With the support of this scholarship, Gonzalez spent his summer in France, where he practiced his language skills and “learned so much about French society and politics. I loved how all of us students were engaged in learning about the culture and how we challenged ourselves to absorb as much as we could.”

Across the globe in Costa Rica, sophomore Gabrielle Gundry spent her summer learning about the tropical ecosystem and sustainable development.

“My trip changed me in the best of ways,” she says. “I saw a piece of the world that has been mostly unexplored, and discovered that what I am studying is indeed what I’m most passionate about; I was reassured that improving the environment is the impact I would like to make on the world.”

While in Costa Rica, Gundry observed different sustainability techniques that the Ticos (Costa Ricans) use on their farms, and she conducted her own research on how soil erosion differs on various topographic slopes.

For both students, their study abroad experiences have them thinking about their futures. After he graduates from Iowa State, Gonzalez plans to pursue a master’s degree and doctorate in sociology, focused particularly on political sociology and social inequalities.

As for Gundry, guided by her experiences in a Central American country, she hopes to someday pursue a career in environmental policy and law, specifically focusing on natural resources.

“Scholarships like the LAS Dean’s High Impact Award for Study Abroad mean the world to students. Without the support, I would’ve never had the opportunity to expand my horizons and change my world perspective.”

LUIS GONZALEZ

who hopes to become a donor upon graduation from Iowa State to enable students to gain global experiences like he did in France this past summer.

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LIKE MANY IOWA STATE STUDENTS, junior Kobe Gaines is involved in a slew of activities and organizations that complement his journalism major and minors in speech and sociology. Also like many students, he holds down more than one job while pursuing his degree. With modest family means, he’s paying for college on his own.

He’s on track to graduate in 2020 — if he can keep paying his bills. Last semester, he couldn’t.

Jurnie Hinde can relate. The sophomore in pre-med had saved every cent from babysitting, lifeguarding, serving pizza and working on campus in a research lab. Even with scholarships and maxing out federal loans, she still came up $5,000 short on her U-Bill.

“I just broke down. No way could I pay it off,” she says. “My parents always told me I could be whatever I wanted to be, but they couldn’t help any more. The money was not going to come out of thin air.”

Roberta Johnson, director of financial aid, says their experience is not unusual. Although the particulars vary from student to student, many struggle to put together enough money to pay for college. Some have to drop out.

“Alums often ask, ‘Why can’t students work to pay for college like I did?’” Johnson says. “When I went to college in the ’70s, I paid $1,650 a year for tuition, fees, room and board. Today, those same expenses run more than $17,700, an increase largely due to diminishing investment in public higher education by the state over several decades. There’s no way students can earn that much money working part time.”

She says the financial aid office “looks under every sofa cushion” to find enough money to keep students at Iowa State and graduate. And now, thanks to the availability of completion grants and emergency scholarships, her office has additional sources to allocate.

“Our receivables office identifies students who can’t register for classes because they owe money,” Johnson says. “We contact those who qualify, and sit down with each of them to determine their need and go over all available resources of aid.” The process includes a mandatory counseling session in the Student Loan Education Office.

“We want to make sure they receive this award only once and avoid a repeat of the problem.”

Students like Hinde and Gaines were grateful for the help.

“I got an email saying I would receive assistance,” Hinde says. “It was a huge weight off my shoulders. I’ve been applying for scholarships like crazy, and between them and my job nannying over the summer, I should have tuition covered for next year.”

Johnson says the scholarships and grants aren’t a handout, but “a way out for those who have no other options. It’s a tool we can use to get students to graduation and about the business of being a contributing member of the community.”

Gaines says he not only has his 2018-19 tuition covered with a job as a lot technician at Bob Brown Chevrolet in Ames, he’s paying back student loans as he goes.

“I realized from a young age my parents couldn’t help me, so every paycheck gets split between Sallie Mae and savings. I want to work, work, work. I never want to be in a position where I can’t support my family.”

Iowa State students coming up a bit short on their U-bills are getting the assistance they need to stay in school and make better financial decisions through completion grants and emergency scholarships.

By Susan Flansburg | Photo by Paul Gates
Cultivating civil discourse
With an aim to foster open civil discourse at a time when it is greatly needed, the Kerry and Linda Killinger Foundation has pledged support for the 2019 Greenlee Summit, hosted by the Greenlee School of Journalism and Mass Communication, which will allow the school to build upon the momentum of its inaugural summit this past spring, a sold-out event. The summit, scheduled for September 2019, will promote discussion on media, politics and civil discourse as the 2020 election heats up.

Throughout her lifetime, Jacobson helped to enhance University Museums by contributing both personally and professionally, including project management of “Campus Beautiful,” strategic planning for the Christian Petersen Art Museum and establishing a mentor program.

“Early on during her time at Brunnier Art Museum, she knew it had changed her life’s direction, and in the end, it was Lori who helped transform University Museums into a better academic museum serving Iowa State students and audiences beyond Ames,” says Pohlman. “She understood the power and magnitude of a well-rounded, land-grant university, thus enlightening citizens to better the world.”

In honor of Jacobson, who passed away earlier this year, her husband, Jason Kogan, has made a gift to name the entrance gallery in the planned remodel of the Brunnier Art Museum as the Lori A. Jacobson Gallery. “University Museums played such an important role in Lori’s career that I believe the best way to honor her legacy is to make this gift,” says Kogan. Pohlman adds, “It is most befitting that the new entrance gallery be named to honor Lori, a person of impact, who strove to create beautiful and inspired learning through art. Iowa State students and guests will long be impacted by her aesthetic legacy.”

Dyno-might
If you’ve ever watched a car commercial set in a laboratory, the tires of a motionless vehicle spinning on rollers, you’ve seen a chassis dynamometer in action. And with the construction of a new $2.9 million dynamometer at the Agricultural Engineering and Agronomy Farm just outside Ames, Iowa State’s will be one of the few publicly available chassis dynamometers in the world capable of testing large construction and farm machinery, including tractors and combines. Danfoss Power Solutions of Ames, which contributed $1.8 million to the project, makes hydraulics and electronics for heavy equipment manufacturers, so using Iowa State’s dynamometer will be beneficial and will better prepare students Danfoss wants to hire, like the engineering students who will work on research projects using the facility.

“$1.5 BILLION
is the ambitious new goal for the Forever True, For Iowa State campaign to unlock human potential, creativity and innovation at Iowa State. (LEARN MORE at ForeverTrueISU.com)

“IT IS A GREAT HONOR TO BE NAMED THE DR. E. A. BENBROOK ENDOWED CHAIR IN PATHOLOGY AND PARASITOLOGY, A POSITION THAT ALLOWS US TO REMEMBER THE WORK OF DR. BENBROOK, WHO WAS A VERY ACCOMPLISHED RESEARCHER AND INSTRUCTOR IN THE COLLEGE OF VETERINARY MEDICINE.”
— Dr. Richard Martin, the inaugural holder of the Dr. E.A. Benbrook Endowed Chair in Pathology and Parasitology, whose work with parasites has led to many discoveries relevant to both human and animal health.

FROM MOLECULES TO MALARIA
The newest generation of chemical instrumentation has arrived at Iowa State thanks to the Roy J. Carver Charitable Trust of Muscatine, Iowa. The trust’s $378,105 gift enabled the purchase of advanced mass spectrometry instrumentation, which is used to identify and characterize molecules. The new instrumentation will grow the scope of scientific investigation at Iowa State, while enabling research teams to move current studies forward faster and more efficiently.

“With the Roy J. Carver Charitable Trust’s support, Iowa State acquired emerging technology that was unavailable in Iowa before now,” says William Jenks, chair of the department of chemistry. The Carver Trust also committed $382,915 to support Assistant Professor Joshua Beck, who is working to understand how parasites subvert their host cells during the liver stage of malaria infection. The results of his studies could provide new information relevant to the design of novel therapeutics and vaccine strategies for malaria.
Seeding global food security

The late Norman Borlaug, founder of the World Food Prize, once said, “You can’t build a peaceful world on empty stomachs and human misery.” Moved by Borlaug’s work and dedication, 1978 alumni Jim and Marcia Borel recently established the Borel Global Fellows Program at Iowa State. Borel Fellowships will be awarded to students from Africa who are pursuing advanced agricultural degrees and intend to return to Africa, particularly the sub-Saharan region, upon graduation to address food and nutrition insecurity and poverty as well as help subsistence farmers improve their productivity and grow to commercial success.

Through their life’s work and travel – Jim’s career in food and agriculture at DuPont and Marcia’s roles as a social worker and volunteer – the Borels have seen firsthand the life-changing impact that access to improved tools, better seeds and education on enhanced agricultural practices has had on subsistence farmers and their families, ultimately leading to food security and poverty alleviation.

The Borels chose to establish the Borel Global Fellows Program at Iowa State because “it has the best College of Agriculture and Life Sciences in the nation – and perhaps the world,” Jim says. “Iowa State is at the forefront in understanding rural development in developing countries, and the passion of its key leaders will continue to propel them forward in this arena.” Marcia adds, “We hope the program can bring awareness to more people about global food insecurity and perhaps encourage others to get involved.”

A POSITIVE PREDICTION FOR THE FUTURE

The expertise of Iowa State alumni has extended into myriad fields since its earliest days, including that of Charles Roy Henderson. A pioneering developer of statistical methodology, Henderson earned three degrees in animal science from Iowa State between 1933 and 1948 before spending nearly 30 years at Cornell University heading its animal breeding division.

In honor of Henderson, David Harville, a past student of Henderson’s and former professor of statistics at Iowa State, established the C.R. Henderson Fund for Excellence in Predictive Inference and its Applications. Harville’s gift will help enhance the state of predictive inference within the statistics department, as well as enrich its reputation and visibility.

“Predictive inference is important because it helps people make informed decisions, such as predicting the sale price of a home, which may be useful for a home seller trying to set a price, or for a home buyer deciding on an initial offer,” says Dan Nettleton, Laurence H. Baker Endowed Chair and Distinguished Professor in the department of statistics, noting that the fund was a primary source of support for a predictive inference conference held on campus this past spring. “The fund has already had a great impact on research at Iowa State,” he says.

ACCOLADES

Recognizing young philanthropists

Each year, Iowa State University Foundation presents the Emerging Philanthropist Award to an individual or couple who, at age 50 or younger, have provided philanthropic support and creative leadership to the foundation and university. This year’s recipients are Julie (B.S. agricultural business 1988) and Jay (B.S. agricultural business 1988) Jacobi, and Karen (B.S. distributed studies 1989, Ph.D. sociology 2010) and Doug (B.S. agricultural journalism and B.S. public service and administration in agriculture 1989) Jeske.

The Jacobis have supported their alma mater in various capacities, including the Jay and Julie Jacobi Scholarship for Agricultural Study Abroad in the College of Agriculture and Life Sciences, established to help students gain valuable global experiences through Iowa State’s study abroad programs. “We are thankful for what we can do, and it’s our honor to be able to share it with the next generation of students at Iowa State. We hope it gives them an edge on their career and where they want to go,” Julie says.

The Jeskes have given to multiple university entities, including the JackTrice Character Award, the College of Design, the College of Liberal Arts and Sciences and Cyclone Athletics. Says Karen, “We’re here today because we believe in Iowa State’s potential to influence and challenge new generations of students.”
through this work, I want to provide helpful advice to graduation. After experiencing a serious illness, Chris Osborn, a senior in management information systems and recipient of the Craig Hansen and Judith Ralston-Hansen Business Scholarship, appreciates each day – and has learned what really counts in life.

Tell us about your life-changing experience. My college journey is quite different from most students’ experiences. During my sophomore year in 2013, I was diagnosed with stage III testicular cancer. After chemotherapy, I was declared to be in remission.

However, once I started classes again, I learned I had tumors growing near my spine. I dropped out of school that day and traveled across the country for specialized surgery, during which even more tumors were found. I underwent high-dose chemotherapy and received a tandem cell transplant, and I have been in remission for about three years.

How have things changed since you’ve returned to Iowa State? I’m still involved in activities on campus, but I also volunteer as an ambassador for the Testicular Cancer Awareness Foundation, and for Imerman Angels, a senior in management information systems and recipient of the Craig Hansen and Judith Ralston-Hansen Business Scholarship, appreciates each day – and has learned what really counts in life.

How has your experience shaped you as a student? In some ways I’m more serious than other students, but I’m not as stressed about my classes. It’s made me aware that I’ll only be in school so long, and I want to get the most out of the experience and lay a good foundation for my future – which I hope will include landing a job in the information technology industry and starting a family with my girlfriend, Brenda [Garcia], who is majoring in human services at Purdue University Global, who stuck with me through years of chemotherapy.

What’s the biggest lesson you’ve learned? I’ve realized that all the objects, all the tangible things around us – none of them mean anything. What’s most important in life is our relationships with other people. Since then, I focus on having positive relationships, being as happy as I can and making others happy.

What advice do you give the people you mentor? Become an advocate for your own health. Get as much information as possible and trust your instincts – sometimes you need a second opinion. I also tell them, “If you’re not feeling good one day, just get through to the next day until eventually things get better.”

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Taking a spin
In July, in addition to looping the track in Jack Tice and taking their photos with Cy, RAGBRAI riders spun the trivia wheel at the Forever True booth to test their knowledge about the impact of donor support at Iowa State. (Hint: the answers were all True.)