Entrepreneurism: the fuel to create and innovate
ENTREPRENEURISM: THE FUEL TO CREATE AND INNOVATE

By Jodi O’Donnell

PHASICA LLC

Founded: May 2012

Technology: 3-D imaging that instantly creates high-precision digital 3-D models from real objects for 3-D printing, importing into video games and animations, reverse engineering, or creating architectural designs.

People: Co-founders William Lohry (on left), doctoral student in mechanical engineering, and Sam Robinson, 2012 engineering graduate; developer Nik Karpinsky (on right), doctoral student in mechanical engineering.

Technical mentor: Song Zhang, William and Virginia Binger Assistant Professor of Mechanical Engineering.

Business mentor: Judi Eyles, John Pappajohn Center for Entrepreneurship.

Catalyst experiences: winning the 2012 Pappajohn New Venture Student Business Plan Competition; participating in the summer 2013 Okoboji Entrepreneurship Institute.

First major consumer product launch: spring 2014.

Lohry’s life-changer: “One of the greatest aspects of the Okoboji Entrepreneurship Institute was that every participant received scholarships to attend, and the institute itself was funded by generous donors. This helped ensure that everyone had the opportunity to attend the life-changing experience.”

Iowa State’s mission to share knowledge is evident in the strong entrepreneurial spirit being fostered in today’s students, who are finding new ways to better lives and society.
WINTER 2014

THE BIG PICTURE

When Shvani Garg began her graduate program in biochemistry at Iowa State University, she never expected that before adding “Ph.D.” after her name, she would put another designation there: president of her own company, OmegaChea Biorenewables LLC.

“When I began my research, I didn’t envision starting a company,” Garg says. “I was just working on understanding the structure of my enzymes and how to manipulate the pathway, hoping to have an application somehow down the line. It happened that we could get closer to commercialization now.”

Peter Keeling will tell you that there was much more to Garg’s success than happenstance. As the industrial collaboration and innovation director for the National Science Foundation Research Center for Biorenewable Chemicals, Keeling oversees the BioBased Foundry. Its purpose is to develop technology-led entrepreneurs at Iowa State, particularly graduate students like Garg.

“Graduate students are technically very deep in insights, but may lack the skill to translate their research insights into innovations that can be commercialized,” he explains.

Garg took Keeling’s entrepreneurship course in spring 2010 with no business application for her research in mind. “Months later when my major professor and I saw commercial potential in my research, I already knew what needed to be done.”

Today, Garg is as versed in OmegaChea’s business strategy as the research it’s based on, work she finds “absolutely thrilling,” she says. “Right now there are few ways to make biobased plastics. This new intermediate could lead to new types of biobased polymers and applications for detergents and motor oil. We’re scaling up the technology ourselves to de-risk it — piloting it to establish its economic and technical feasibility — so that a company can take it to an industrial scale.” (See p. 7.)

Garg is among a growing corps of undergraduate and graduate students who are part of an emerging model for funneling new knowledge discovered at Iowa State into the commercial pipeline. The model shifts business development with university-based discoveries from the traditional technology transfer by outside companies, and instead concentrates on creating an innovation ecosystem that engages students and faculty in the process of determining whether a business use exists for their research and ideas.

As Keeling says, “Why not seed small companies at Iowa State not only to de-risk the technology, but also to foster students’ entrepreneurial, innovative spirits while they’re here?”

Galvanizing ideas

“You could say innovation is part of Iowa State’s DNA,” says Jonathan Wickert, senior vice president and provost. “Innovation is about making things that work; a culture that started with Iowa State’s land-grant mission of serving Iowa’s needs. Yet it has only been in the past 25 years that Iowa State built the infrastructure that has resulted in an unprecedented surge in faculty- and student-generated innovations that are making their way into the products, services and processes we use daily.

One of the main engines for transforming entrepreneurship education and business development at Iowa State has been the John Pappajohn Center for Entrepreneurship, established in 1996 by John and Mary Pappajohn. While based in the College of Business, the Pappajohn Center serves as the conduit for Iowa State’s colleges to integrate the academic, programmatic, outreach, and business development components of entrepreneurship into their programs.

Since then, thousands of students and faculty have accessed resources through the center that have set them on their entrepreneurial journeys, including current graduate student William Lohry.

As a freshman honors student, Lohry was able to plunge into research the moment he stepped on campus, joining the 3-D lab of Song Zhang; William and Virginia Binger Assistant Professor of Mechanical Engineering. By Lohry’s senior year, the chemical engineering major, along with another engineering student, Sam Robinson, had acquired the depth of knowledge to identify a way to improve the quality and speed of 3-D scanning. But where to go with their idea?

Enter the Pappajohn Center. Staff members Judi Eyles and Mike Upah worked with the students to develop a business plan to submit for the Pappajohn New Venture Business Plan Competition in 2012. The students won the $5,000 first prize, which they used to found Phasica LLC. (See p. 2.)

“I don’t know that Phasica would be where it is today without the Pappajohn Center,” Lohry readily admits.

The Office of the Vice President for Research has become another conduit on campus for identifying innovations and supporting entrepreneurship.

“We’ve been working on our process for taking discoveries from lab bench to marketplace, helping startups find the best opportunities for funding and building successful business models,” says Lisa Lorenzen, executive director of the ISU Research Foundation and the Office of Intellectual Property and Technology Transfer.

With the help of Iowa economic development appropriations to the Board of Regents, more than 90 projects have been supported over the past seven years, resulting in the formation of 18 new companies and 12 other startups. In 2012, the ISU Research Foundation brought in part-time entrepreneur-in-residence Kurt Heiar. A private sector CEO and entrepreneur, Heiar assists researchers in moving technology into the marketplace, and helps fledgling Iowa State-affiliated companies and entrepreneurs overcome problems to keep them moving forward.

“Values proposition

IOWA STATE INNOVATORS THROUGH HISTORY

A key leader of the American women’s suffrage movement, 1800 graduate Carrie Chapman Catt devoted her life to expanding women’s rights worldwide.

With the invention of hundreds of products derived from peanuts and soybeans, 1904 graduate George Washington Carver, classes of 1894 and 1896, revolutionized the South’s economy.

Henry A. Wallace, class of 1910, was the first of many Iowa State innovators in seed corn hybridization.

Economics professor Elizabeth Hoyt conceived the Consumer Price Index in 1915.

Head of chemical engineering from 1920-48, D.R. Sweeney led the development of the soybean-oil extraction process enabling soybeans to be used commercially.

In 1937, the world’s first electronic digital computer was conceived by physics professor John Vincent Atanasoff, classes of 1925 and 1926, and graduate student Clifford Berry, classes of 1939, 1941 and 1948.

In 1937, dairy microbiologists Clarence Lane and Bernard Hammer patented the process for making Maytag blue cheese.

In 1920 graduate Henry Brunner pioneered earthquake-resistant design, helping to create such structures as the San Francisco-Oakland Bay Bridge.

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The culture being built at Iowa State to foster entrepreneurial innovation is especially relevant for current and upcoming cohorts of Iowa State students. This generation of young people not only expects their education to be highly experiential, they are greatly motivated by experiences in which they join with others with varying perspectives to explore how to best serve the larger good.

Luis Rico-Gutierrez, dean of the College of Design, terms this social entrepreneurship. In essence, “In times of dwindling resources, how can we come together to solve problems?” he says. “This is a characteristic of the new generation of entrepreneurs – they are driven to solve big societal problems. Through research and practice, we know that teams with diverse backgrounds and complementary points of view make the process of innovating more successful.” And with Iowa State’s environment of cross-disciplinary collaboration, he says, “the sky’s the limit” in what students and faculty can accomplish.

Lorenzen agrees. “What’s unique about Iowa State’s culture of innovation and entrepreneurship is the number of people who care and will jump in to collaborate. The future is in programs like industrial design, which may work with both engineering and sociology to bring together the whole product package.”

The team spent an entire semester studying how farmers approach risk and comply with the safety equipment they have, Ringholz says. “The biggest challenge is attitudes.” Like wearing motorcycle helmets or seatbelts, “getting people to change is the hardest part. We took an innovative approach, applying design thinking to the problem to effect a positive change in tractor operators’ behavior.”

In essence, he says, “By helping students reach their highest and best potential, we’re helping them save people’s lives.”

**Iowa State’s outlook: on the rise**

With a major expansion of the ISU Research Park planned that will centralize services helping student and faculty entrepreneurs, and will add another 1.5 million square feet of space for university-generated outside startups, Iowa State is continuing to build the entrepreneurial environment in which innovation can thrive. Yet like the entrepreneurial endeavor itself, the entrepreneurial environment in which innovation can thrive.

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An example is the tractor rollover notification device developed last year by a team of students and faculty in industrial design, environmental behavioral psychology, and engineering.

“We started out thinking it was a design problem – issues having to do with hardware and equipment design,” says David Ringholz, associate professor and chair of industrial design. “We quickly realized there was as much to learn about the behavior [leading to tractor rollovers] as the equipment.”

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EXTENDING IOWA STATE’S IMPACT THROUGH PHILANTHROPIC GIVING

What you can do

Like the entrepreneurial endeavor itself, fueling innovation and creativity at Iowa State is dependent on the confluence of numerous resources, including private giving. Moving Students Forward seeks to prepare Iowa State students with the experiences and opportunities that will enable the next generation of graduates to invest their own innovative, individual equity in our future.

- Flexible funds in the form of undergraduate research support and graduate student fellowships, as well as endowed or expendable faculty funds, create opportunities for Iowa State students to have their eureka moments, and to lead the university to even greater levels of discovery.
- Funds to support services and provide seed grants help Iowa State students and faculty start up, de-risk and scale up their ideas and innovations— and bring them to marketplace that much faster.

What you can do

Learn more about Iowa State students’ entrepreneurial innovations online at www.foundation.iastate.edu/forwardmag.

What you can do

As a doctoral student, David Nicholas, classes of 1967, 1968 and 1971, invented the digital text conversion process making fax machines an office staple.

1981 doctoral graduate Bruce Roth developed Lipitor, the top-selling drug in pharmaceutical history.

In 1986, Ames National Lab scientist and adjunct professor Iver Anderson patented the lead-free solder alloy now used in electronics worldwide.

Animal science professor Max Rothschild co-directed the international research team that successfully sequenced the pig genome in 2009.

Materials science and engineering professor Dan Schechtmann was awarded the 2011 Nobel Prize in Chemistry for his 1982 discovery of quasicrystals.

Trail-blazing research by psychology faculty members Craig Anderson and Doug Gentile during the 2000s has demonstrated a link between video games and youth violence.

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515.294.4607 | toll-free 866.419.6768
www.movingstudentsforward.com

THE BIG PICTURE

Equipped to enrich Curtiss Hall, the historic home of the College of Agriculture and Life Sciences, recently underwent a complete revitalization. Among its features are the new Neil and Darlene Harl Commons, and the Leonard and Evelyn Dolezal Auditorium (pictured here), dedicated in October.

Watch Online
Learn more about Iowa State students' entrepreneurial innovations online at www.foundation.iastate.edu/forwardmag.

In fact, Keeling says, one of private giving’s greatest opportunities lies in helping create an investment hub for Iowa State startups. “We need to build the existing funding structure and engagement with entities who are doing or want to do this kind of seed funding.”

“It’s that flexible funding that enables faculty and students to have their eureka moments,” Lorenzen adds. “Philanthropy can provide those funds, whether through endowed faculty chairs or supporting graduate and undergraduate research.”

And with President Steven Leath’s initiative for cross-disciplinary research poised to spur the university to even greater levels of discovery, investing in Iowa State’s “stock” is as near a sure return as can be found these days.

Says Keeling, “If you can get an entrepreneurial, innovative culture going, students talk about it to others, who then want to know how they can get involved,” which will inspire new generations to invest their own innovative, individual equity in our future.
CRAVING A SANDWICH AS HE STROLLED the streets of Paderno del Grappa in northern Italy, Tyler Dunleavy discovered that businesses there operate differently than they do in the States.

It was Wednesday afternoon and the Tabacchi – an Italian convenience store – he sought out was, to his surprise, closed. But that was OK. Dunleavy, from Lino Lakes, Minn., and accustomed to a 24-7 world, was spending a semester at the Consortium Institute of Management and Business Administration as part of the study abroad program in Iowa State University’s College of Business. The experience was just the first of hundreds of such a-ha moments.

“It prepared me in the sense that you’ve got to be able to adapt to a place’s norm and understand people if you’re going to interact with them,” says Dunleavy, who studied at CIMBA in fall 2012. “I might have to do business sometime with someone who operates differently.”

The semester at CIMBA is among several opportunities available to Iowa State business majors for overseas study, a list that includes China, Australia, France, Germany, Greece, England and Mexico.

Semester-long programs include breaks for travel, allowing students to further enhance their awareness. Another Iowa State student who studied at CIMBA in fall 2012, Alysha Rau of Council Bluffs, visited 14 countries. “Every day was a new adventure,” she says.

“The College of Business has made augmenting international study and experiences a priority, so graduates are prepared to navigate the complex world landscape,” says David Spalding, Raisbeck Endowed Dean of the College of Business.

“Studying abroad is a transformative experience that enriches students both personally and professionally, and is especially valuable for business students in today’s interconnected, global economy,” he explains. For example, last year graduate students participated in a case study trip to China to better understand international supply chain logistics.

Cost is the main reason only 3 percent of Iowa State’s business majors study overseas, says Lee Van Brocklin, study abroad coordinator for the College of Business. Privately funded scholarships greatly help with the expense, which averages about $17,000 for a semester. Dunleavy received the Frank and Marcia Parrish International Business Scholarship, and Rau received the Schuler Study Abroad Business Scholarship. Both students say the scholarships made all the difference in the world.

“The scholarship allowed me to travel outside of Italy and not have to worry that ‘oh, maybe I should stay back this time,’” Dunleavy says.

And the benefits of studying abroad are immeasurable. “Studying abroad was by far the most valuable aspect of my education at Iowa State,” Rau says. “I had to learn to communicate with people who don’t speak the same language. It was a big challenge, but something I can utilize in my career – figuring out ways to overcome barriers you might have with someone.”

Ik ben een Amsterdammer
Tyler Dunleavy bridging the cultural gap on his study abroad travels.

LEARN MORE
Learn more about supporting study abroad for students in the College of Business at www.movingstudentsforward.com
BIG OPPORTUNITY FOR BIG IMPACT

Big Data holds the potential for tackling many challenges of scientific and societal importance. That’s why Iowa State is investing in faculty who will strengthen the university’s Big Data niche areas, and help carve out new ones.

IOWA STATE WAS INTO BIG DATA before Big Data was big. According to Jonathan Wickert, senior vice president and provost, Big Data at Iowa State University goes back to the mid-1990s, when faculty in the new fields of bioinformatics and computational biology arrived. Researchers were just starting to grasp the challenges created by the unprecedented amounts of data being generated and collected. Yet they were also excited by the unprecedented opportunities these massive data sets provided for comprehensive research across every discipline.

Since then, Wickert says, Iowa State has built specialties in the data-crunching arena. In plant and animal genetics, rapid DNA sequencing and gene expression tools provide trillions of bytes of data for discovery. In weather prediction and climate modeling, the Iowa Environmental Mesonet of public and private weather stations gathers reports to evaluate atmospheric conditions. In engineering and computer science, Iowa State’s Virtual Reality Applications Center creates tools to generate and visualize Big Data. And faculty at the Ames Laboratory, the U.S. Department of Energy facility on campus, focus on materials informatics, gathering and searching information on combinations of rare earth and other minerals to pair with appropriate applications.

Under President Steven Leath’s High-Impact Hires Initiative, the university will recruit a dozen new faculty to work in areas that both harness Big Data and apply it in research, as well as to train the students who can help fill the deep analytic talent gap. Some positions will augment Iowa State’s niche areas: genetics, development and cell biology; plant pathology and microbiology; veterinary medicine, statistics, and computer science. But faculty also are sought for cross-department initiatives in engineering, business analytics, and privacy and security.

New faculty in Big Data will join researchers like Patrick Schnable and Wallapak Tavanapong.

“Data scales have exploded,” says Schnable, director of the Plant Sciences Institute, and Iowa Corn Promotion Board Endowed Chair in Genetics. In the 1980s, he worked an entire summer to read a thousand DNA base pairs. Now instruments can read about 40 billion per week. With data growing faster than computing power, “We need even bigger and faster computers, and better, faster algorithms.”

Schnable and researchers at several institutions are part of a three-year, $2 million National Science Foundation BIGDATA grant to develop computational tools to interpret the information flood.

Tavanapong, associate professor of computer science, develops data mining and analysis techniques for medical images to improve the quality of exams, particularly colonoscopies. EndoMetric, the company she and computer science professor Johnny Wong founded with associates at the University of North Texas and Mayo Medical School, processes more than 160 gigabytes of data a day—enough to nearly fill a typical desktop computer’s hard drive.

In the past, “People haven’t captured this data, because they didn’t know what to do with it,” Tavanapong says. The tools she and her colleagues create do use such data to help with reducing the estimated 4-12 percent of polyps and cancers colonoscopies miss—improving both doctor performance and patient outcomes in a classic example of Big Data’s potential.

By Thomas R. O’Donnell
Illustration: Mario Wagner
Grand plan comes full circle

It started with an offhand comment Roy Reiman made in 1993 to then Iowa State President Martin Jischke about the “bland” view visitors encountered coming to campus from the south. By 1995, Reiman achieved part of his vision to provide “a fitting preview of one of the prettiest campuses in the country” with the 17-acre botanical garden bearing his family’s name.

Now, a $25 million lead gift by Roy, class of 1957, and Bobbi, 2006 honorary alumna, Reiman will complete that vision by creating a stunning grand entrance to Reiman Gardens, and enclosing the south end zone of Jack Trice Stadium to heighten the game-day experience for thousands of fans.

The pledge by the Reiman Foundation – the largest publicly announced gift by an individual donor in the history of the university – is “transformational,” said Roger Neuhaus, president and chief executive officer of the Iowa State University Foundation. “Through their unparalleled generosity and passion for Iowa State, the Reimans continue to shape a lasting legacy that will impact countless generations of Cyclones.”

Roy Reiman’s love of horticulture is rivaled only by his love for the Cyclones, which dates back to his college days when he served as spotter at football games for Dale Williams, the school’s radio play-by-play man. His support of Iowa State has been a fixture in his life since graduation.

“Bobbi and Roy’s love of Iowa State is genuine, and their connection with Cyclone Athletics is truly special,” said Athletics Director Jamie Pollard.

“The impact that Roy and Bobbi Reiman have made on this campus is extraordinary,” President Steven Leath said. “Their generosity through their family foundation has been felt by many units and facilities throughout campus. We are delighted to receive this pledge, and we are committed to beautifying the entrance to Iowa State University and enhancing Jack Trice Stadium.”

“I’m simply proud to be a Cyclone, and to have the opportunity to make a difference at the university that made so much of a difference for me,” said Roy Reiman.

Watch video announcing the Reimans’ gift and learn more about the project at www.foundation.iastate.edu/reimangift

Mid-year bump

1,512 bachelor’s degrees
199 master’s degrees
108 doctoral degrees
1,819 total Iowa State students who graduated at the end of the fall 2013 semester, besting the previous record of 1,784 in 2002 and marking the first time the fall degree tally topped 1,800.

Turf’s up — again

There were a lot of firsts at Super Bowl XLVIII, held Feb. 2 at MetLife Stadium in East Rutherford, N.J.: First outdoor, cold-weather Super Bowl. First to take place in the northeast. First hosted by two states, and jointly hosted by two teams.

There was one noteworthy repeat, however: For the second year in a row, an Iowa State University turfgrass management student, senior Josh Lenz, was selected for the prestigious annual Toro Super Bowl Sports Turf Training Program.

With 2013 graduate Kevin Hansen selected as last year’s Toro intern, “I didn’t think I’d have a chance,” Lenz said.

The Gilbert, Iowa, native is also a recipient of the Derek Harmon Memorial Scholarship, named for another turfgrass student who died in 2009. “From what I’ve been told, Derek was a tremendous student, friend and worker, and he touched the lives of so many people.”

Lenz spent a week learning from turf management pros, and was part of the grounds crew during the Big Game.

“It was an honor to represent Iowa State and the turfgrass program,” he said.

Learning from a legend

Lenz shakes the hand of George Toma, who has helped prepare the field for every Super Bowl game.

YOUR OPINION COUNTS!

Help us make Forward magazine as relevant, readable and interesting as possible by participating in a short online survey, arriving in your email inbox in the next few weeks.

If you would like to take the survey and we don’t have your email address on file, just email us at forward@foundation.iastate.edu. Thank you for all you do for Iowa State!
Return to glory

When C.Y. Stephens Auditorium opened in September 1969 with an unprecedented five-night concert series by the New York Philharmonic, the moment heralded a new era in the arts for Iowa State University, the state of Iowa, and indeed the Midwest. So it was fitting that the auditorium’s proscenium curtain reflect this Midwestern cultural renaissance.

Iowa natives and Iowa State alumni J.W. (Bill) and Dorothy Fisher, lead donors for the construction of Fisher Theater, commissioned the Kawashima Textile Mills in Kyoto, Japan, to weave the 80-by-35-foot curtain. Designed by artist and sculptor Mukai Ryokichi, the curtain was named *Giniro-nokigou*, or *Silver Code*.

Now, after more than 3,500 curtain calls, the curtain is undergoing extensive conservation and repair, with the help of university funding and private donors. Textile conservators have already undertaken several lifesaving measures: stabilizing the backing of the art curtain to ensure its durability as it hangs in perpetual exhibition; replacing the rod pockets, worn thin from years of use; and cleaning the back lining. The remaining months of the project are being devoted to cleaning and repairing the front of the curtain, a meticulous process that must be completed by hand. Also planned is re-rigging the curtain to stabilize it and ensure it remains functional and is showcased to best effect.

“President James Hilton’s vision was to transform Iowa State, both intellectually and physically, from its historical roots in agriculture and engineering to encompass the humanities as expressed in the arts and education,” said Lynette Pohlman, director and chief curator of University Museums. “Restoring Silver Code within the crown jewel of the arts at Iowa State preserves this legacy for current and future generations of arts patrons.”

View photos and video of the restoration, and learn how you can support this project, at www.museums.iastate.edu

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Iowa State #1

The College Atlas Encyclopedia of Higher Education ranks U.S. colleges and universities nationally based on three As: academic quality, affordability, and accessibility. So it’s not surprising that first overall on its list is Iowa State University.

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A SCIENCE OF BILLIONTHS, WITH POTENTIAL FOR BILLIONS

“This is truly one of the dream teams working on vaccine research anywhere in the world. [Our] integrated bench-to-bedside approach will translate exciting scientific discoveries to life-saving products.”

—Balaji Narasimhan, Vlasta Klima Balloun Professor of Chemical and Biological Engineering and leader of a team of university, medical school, research hospital, national laboratory and industry researchers that will design nanovaccines targeting diseases such as tuberculosis, malaria, biodefense pathogens and cancer, and eventually establish a national nanovaccine research center.

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DO YOU KNOW WHICH DECADE THIS CY IS FROM?

Hint: Disco was king, and Hilton Magic was born.

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STEEPING IT UP

Step into the shoes of a few current students, such as veterinary medicine major Hunter Vandenberg, Russell G. and Lora L. Talbot Scholar in Veterinary Medicine, to learn how private giving is helping them along their educational journey at Iowa State at www.foundation.iastate.edu/shoes
**STEWARD OF STUDENTS**

Helping students thrive at Iowa State is the Frank E. Peterson and Willard R. Peterson Scholarship Fund, established by the late Maxine Sweatt in memory of her grandfather and father, both Iowa farmers.

By Jodi O’Donnell | Contributed photo

IT’S A BIT OF A MYSTERY, even to those who were close to her, why the late Maxine Sweatt chose to create an endowed scholarship fund at Iowa State University with proceeds from the sale of her paternal family farm near Gowrie, Iowa.

Then again, it makes perfect sense: The daughter and granddaughter of farmers, Sweatt was born with both feet squarely planted on Iowa farmland and in Iowa values. A nature lover—her nickname was Bird—she was an active 4-Her for much of her childhood and a lifelong learner who prized education.

Perhaps most importantly, though she had no children of her own, throughout her life Sweatt was very concerned about young people, says Sweatt’s stepdaughter Marilyn Flick, of Lake Havasu City, Ariz. “She always wanted to make a difference in their lives.”

Fittingly, five students this fall received the first awards from the Frank E. Peterson and Willard R. Peterson Scholarship Fund, named in honor of Sweatt’s grandfather and father.

One recipient is Taylor Danger, a junior majoring in architecture with a psychology minor, from Jewell, Iowa.

“My mom is a single parent, so I’m paying my own way through college,” Danger says. She and Flick had the opportunity to meet this fall. “I told Marilyn how thankful I am to have received this scholarship. It’s made things so much easier for my family. I can work less and participate more in my honor societies. And my mom can focus on my little brother and sister instead of worrying about me.”

“Maxine would be pleased to know that funds from the farm are helping so many students gain a college education, as she intended,” Flick says.

After her parents divorced when she was 13, Sweatt never again lived on the land that her grandfather and father farmed for nearly 80 years. Their work ethic and dedication clearly made an indelible impression on her, however. As Flick remembers, “Our dads both said that ‘If you take care of the land, the land will take care of you.’”

Now, the land of Maxine Sweatt’s family is helping steward another of Iowa’s precious commodities: the young people seeking their education at Iowa State.

**Land legacy**

Frank and Willard Peterson tending their farm near Gowrie, Iowa, in 1950. The farm achieved Century Farm status in 2011.

Maxine would be pleased to know that funds from the farm are helping so many students gain a college education, as she intended.

**Marilyn Flick**

Providing support for chemistry instrumentation is unglamorous but necessary. Chemistry relies heavily on equipment and instrumentation, and technology changes as time goes on—it’s become better, faster and more expensive as well.

I had previously thought that charitable remainder trusts were only for people with eight figures to give, but the option is an excellent way to use assets that would otherwise get hit heavily by taxes.

**TOM WEBB**

who earned his doctorate in inorganic chemistry from Iowa State in 1972 and taught chemistry at Auburn University for more than 30 years. His passion for enhancing the educational experience for chemistry students drove his choice to support Iowa State through a department of chemistry equipment fund.

**WAYS TO GIVE**

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

Refining fine dining
Each fall, students in the fine dining management class plan and stage a multi-course dining experience in the Joan Bice Underwood Tearoom. Creating “At Home in Paris,” a gourmet journey through French cuisine, are food science and human nutrition students Lisa Schmidt, Krissy Forsythe (pictured middle and far right) and Emilee Smith, and their hospitality management teammate Katie Fuller. All of these students have benefited from donor-funded scholarships such as the Nancy Degner Culinary Science Scholarship and the Ray Wyrick Scholarship for Excellence.