

# forward

IOWA STATE UNIVERSITY FOUNDATION

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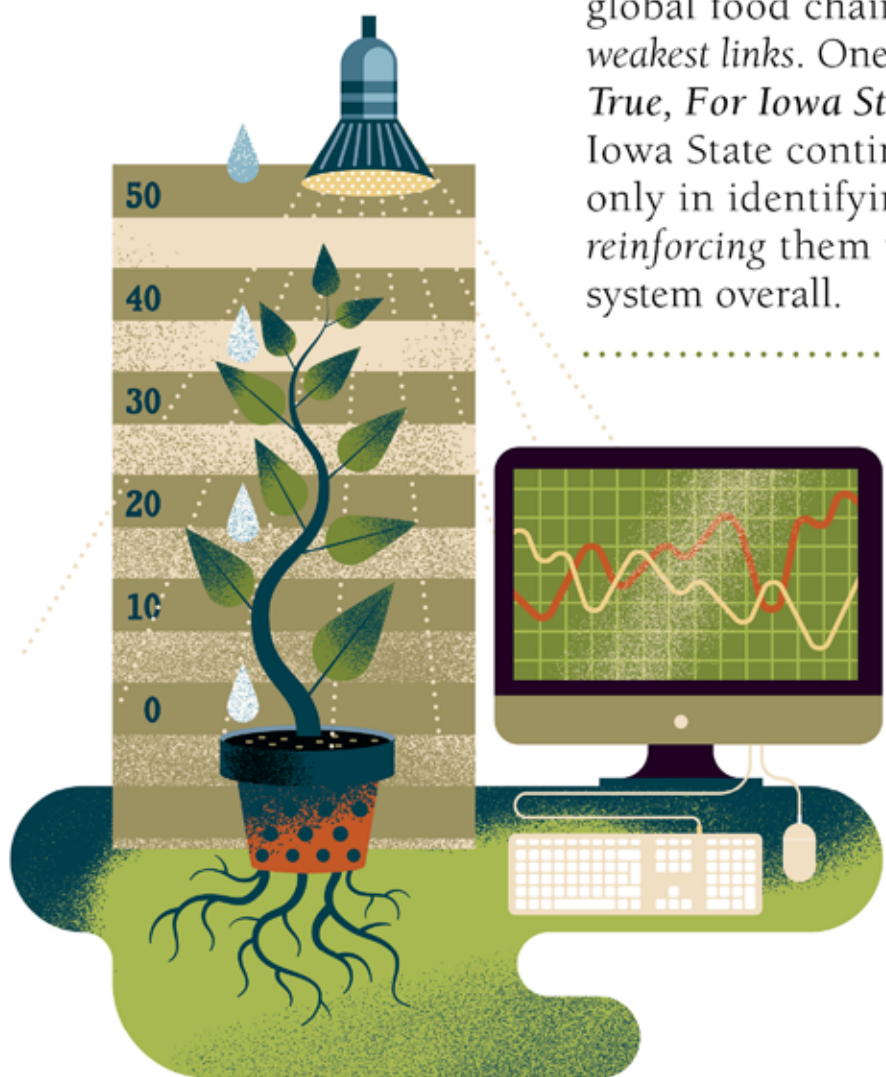
→ The global food chain



# THE GLOBAL FOOD CHAIN

Content by Susan Flansburg and Steve Sullivan  
 Illustrations by Gwen Keraval  
 Contributed photos

With thousands of interconnections, our global food chain is only as *strong* as its *weakest links*. One aspiration of the *Forever True, For Iowa State* campaign is ensuring Iowa State continues to *lead the way* not only in identifying these weak spots but *reinforcing* them to strengthen our food system overall.



## DATA GROWERS

Land and water are diminishing resources. Data, fortunately, is abundant. Using robots, sensors and other high-tech tools, the Plant Sciences Institute's multidisciplinary predictive phenomics team is harvesting and digesting acres of data, and using it to better predict and improve plant yield. The work advances Iowa State's pioneering role in finding solutions to emerging needs in feeding humans and animals.



Wang

## A BETTER YAM

What's in a yam? Everything – for the people in Africa, Asia, the Caribbean and Latin America who rely on it for food security. That's why Kan Wang, Global Professor in Biotechnology, and other researchers are studying the yam's genome. Using revolutionary genome-editing technology, they aim to boost this important global crop's yields, nutritional value and disease resistance.



## AFRICAN CHICKENS

Newcastle disease threatens poultry flocks across the globe, but it's particularly devastating when it strikes the continent of Africa, where small-holder farmers rely on chickens for their family's food and living. The virus is fast and vicious: When one chicken contracts it, the entire flock can catch it and quickly die, taking with it a major source of nourishment and income. While outbreaks in unvaccinated poultry can claim an entire flock, mortality in vaccinated chickens can range nearly as high, with one epidemic claiming 30 to 90 percent of those infected.

Researchers in Iowa State's animal science department are working to enhance chickens' natural resistance to the disease. Conducting cutting-edge genetic experiments on poultry from Ghana and Tanzania, lead researcher Sue Lamont says, "If we can improve the natural resistance of birds to this disease, it will mean a tremendous amount, especially to the small-holder farmers."



Singh

## SUPER SOYBEANS

Asheesh Singh, Monsanto Chair in Soybean Breeding in the department of agronomy, and his team tap vast genetic knowledge to create superior soybean cultivars and germplasm. Singh's team dives deep into soybean germplasm to identify resistance to multiple diseases and pests. Their aim: develop high-yielding cultivars suited to northern climates for improved production.





## URBAN AG MOVEMENT

From backyard bees to front-yard vegetable gardens, the urban agriculture movement continues to challenge local zoning policies. Gary Taylor, ISU Extension and community and regional planning, says such zoning was originally adopted for reasons such as banning the raising of farm animals within city limits due to health and sanitation concerns and promoting aesthetic uniformity. Taylor's guide for Iowa municipalities provides information and sample code language for reducing the barriers to and encouraging the production, processing and distribution of local foods.



## A 'MEGA' REPUTATION

Iowa State's value to the global seed industry could easily be described as "mega." The university is home to the Seed Science Center, one of the world's preeminent seed research centers and representing the largest public seed testing laboratory in the world. The center worked for many years to successfully facilitate access to high-quality seeds for farmers in dozens of countries and regions worldwide. Last year, Iowa State's international reputation and influence grew when it became a partner in the Seed Research and Technology Business Center and Mega Seed Park in Andhra Pradesh, a state on India's southeastern coast. The partnership will improve access to quality seed, strengthen the state's seed industry and promote seed entrepreneurship and trade through science-based policies and regulations.

Bill Gates, co-chair of the Bill & Melinda Gates Foundation, praised the project at an event in India in November 2017, noting that the Mega Seed Park "will drive innovation, not only for higher yielding crops, but also for varieties of regional importance."

## THE HUMBLE, SUSTAINABLE EGG



The humble egg is a powerful and affordable source of nutrients, with the potential to help tackle global malnutrition. Like any raised food product, though, its production requires a delicate balance to achieve sustainable economic, social and environmental goals. That's the vision of the International Egg Commission's Global Round Table for Sustainable Eggs, through which Hongwei Xin, Iowa Egg Council Endowed Professor and director of the Egg Industry Center, is exploring how to achieve sustainability without unintended consequences to the planet.

## AERIAL AG

Matt Darr, agricultural and biosystems engineering, loves a bird's eye view. His team uses unmanned aerial vehicles to scout crops from the sky. The vibrant imagery collected can be used to pinpoint problem spots in a field, improve water management, evaluate plant vigor and, ultimately, help farmers adapt their operations to significantly enhance yield.



## TAKE COVER

A typical acre of Iowa soil contains about 10,000 pounds of nitrogen found in native organic matter. When the soil gets warm and wet, microbes transform the nitrogen into nitrates. In the spring and fall, with no crops to soak them up, these nitrates have a dangerous habit of seeping into Iowa waterways. It's a serious issue, and a variety of strategies to reduce nitrate levels in Iowa's water are being studied at Iowa State, including prairie strips interspersed in crop fields, suites of practices to impact nutrient management across watersheds, recycling of drainage water from crop fields, and edge-of-field runoff retention via wetlands, bioreactors and stream buffers.

William T. Frankenberger Professor in Soil Science Mike Castellano and Matt Helmers, agricultural and biosystems engineering, promote cover crops as a promising solution. For example, planting winter rye into standing cash crops in late fall or soon after a soybean harvest allows the cover crop to establish before going dormant when winter weather arrives. The cover crop wakes up in spring when the soil warms. Castellano and Helmer's research shows that come planting time, the cover crop can be terminated, having played an invaluable role in absorbing nitrates, preventing soil erosion and protecting Iowa's water.



Castellano



Helmers





## SHINE A LIGHT

If a bovine eye takes on a bright glow when hit with a blue light, it can indicate mad cow disease. This breakthrough diagnostic technique involved the food safety-focused team of Jacob Petrich, chemistry, and his collaborators, Mark Rasmussen, animal science, and Tom Casey, formerly of the USDA NADC laboratory. Since 1996, they have been creating light-based methods that detect contamination in food and keep diseased animals from the processing plant.

## ATTACKING FOODBORNE PATHOGENS

Foodborne pathogens like listeria and salmonella sicken 48 million people annually. They are notoriously hard to combat, sticking with tenacity to food preparation areas, food itself and even hands and clothing. Thanks to ongoing research led by associate professor of food science and human nutrition Byron Brehm-Stecher, though, the pathogens themselves are today under attack. His lab is studying the use of natural or "functional" food ingredients such as garlic and green tea in the war against them. These ingredients show great promise in the lab, both as food preservatives and sanitizers.

## FRONTLINE FOOD-ANIMAL PROTECTION

Behind the scenes, the Iowa State Veterinary Diagnostic Laboratory protects our food system. Processing the largest number of food animal diagnostic cases in the nation, the VDL is controlling the viruses and diseases that threaten the animals we depend on for food, and signifies Iowa State's leadership in sustaining our state, national and global food economy.



## MAIZE DEBUGGED, MOLD-FREE

Bugs and mold destroy up to one third of the harvest of small-holder farms globally, threatening to leave families without enough food for themselves or the communities they help sustain. Iowa State is coming at this problem from multiple directions: Dirk Maier, agricultural and biosystems engineering, teaches farmers to build simple and inexpensive drying and storage equipment from local materials. And the Center for Sustainable Rural Livelihoods works side-by-side with Ugandan residents to implement such low-tech, pesticide-free solutions as adapting a clean, used food container to preserve maize and reduce post-harvest losses.

Phillips



Kraus

## PLANT PYRONE POWER

Plants produce powerful molecular compounds that can inhibit harmful bacteria. George Kraus, chemistry, and Gregory Phillips, veterinary microbiology, are leading university-funded research that is creating new, synthetic versions of these compounds, called pyrones. The synthetic versions may fight antibiotic-resistant bacteria, and have beneficial applications in agriculture and the pharmaceutical industry.

## HEALTHY HOOVES

To better understand bovine digital dermatitis, a team led by Paul Plummer, veterinary diagnostic and production animal medicine, studied 60 dairy cows for three years. This has led to new thinking about the bacterial roots of the costly and painful disease, and vital prevention strategies. Just in time, too. The disease is now being found in beef cattle as well.

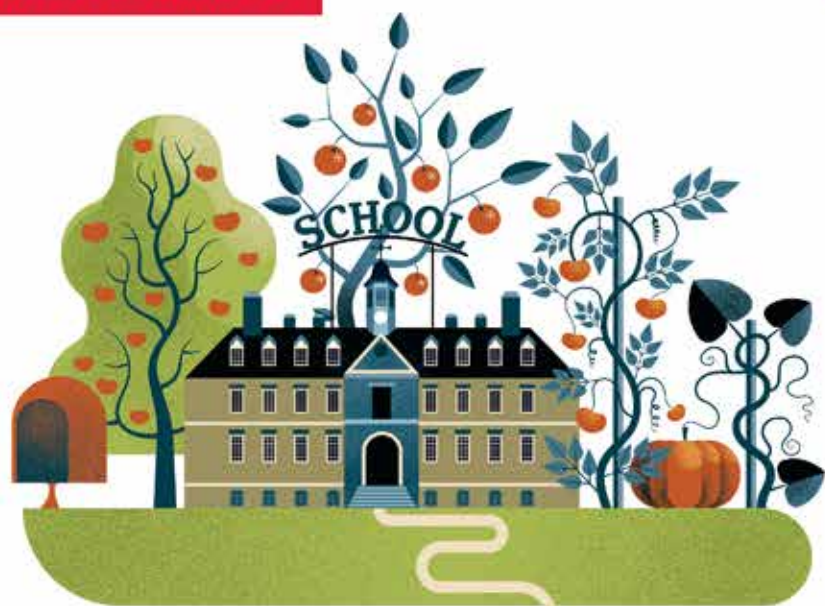


Plummer

## POP GO THE WEEVILS

Tiny poppy-seed-sized grains have become foot soldiers in the war against weevils, by blocking their ability to move and feed in containers of harvested maize. Thanks to research done by mechanical engineering graduate research assistant Denis Bbosa, amaranth is blended with the maize, filling the interspaces and pinning the ravenous weevils in place.





Wang

## ANOTHER USE FOR SOYBEANS

Wax coatings strengthen and waterproof corrugated board to create reliable “transfer packaging” for produce and meat packed in ice. It also creates recycling problems, as the wax coating is unsuitable to the pulping process. Iowa State food science and human nutrition researcher Tong Wang has developed a biodegradable and biorenewable option using soybean-oil based wax. She says comparable performance and costs will satisfy shippers, while soybean growers will appreciate the growth opportunity.

## DIGESTIVE SYSTEM

Community leaders realize that a robust food system contributes to economic development, health and safety, and overall quality of life. Yet the elements of a food system – restaurants, community gardens, food banks, farmer’s markets and more – can involve a host of related issues, including production, processing, distribution, consumption and resource management.

That’s why they turn to ISU Extension and Outreach’s Community Food Systems Program. The program guides partners within rural and urban communities through a process to assess needs and develop strategies to make the most of opportunities and fill gaps. For example, the Local Foods team is assisting several school districts across Iowa with purchasing locally grown produce to serve their students as part of the burgeoning Farm-to-School movement.

## SAFER FOOD PACKAGING

Could Alzheimer’s be connected to contaminants leached from packaging materials into our food? It’s a question that motivates associate professor of food science and human nutrition Keith Vorst, who is developing new technologies to detect contaminants, especially in recycled plastic packaging materials, throughout temperature changes and over time. “We utilize a lot of packaging materials containing plastics that have additives and are subject to temperature changes. The question is, how can we make recycled plastics safer and more cost efficient?”



# GIFTS *at* WORK

## EXTENDING IOWA STATE’S IMPACT THROUGH PHILANTHROPIC GIVING

Photo: Paul Gates



**Planting wisely**  
Made possible in part by the Class of 1955 50-year Class Reunion Campaign, the new Hillside Water-wise Garden at Reiman Gardens reflects a sustainability initiative of being beautiful but requiring little water.



**Under Dorothy Maitland Miller Professor in Graphic Design Bernard Canniffe, students are learning to lead change through design.**

ASKED BY IOWA-BASED FAREWAY STORES, INC for his students' help designing a logo and website for a new venture, Bernard Canniffe, chair of Iowa State's graphic design program and inaugural Dorothy Maitland Miller Professor in Graphic Design, says "I actually told them

**NO.**

"Instead I asked why they thought they needed these things. They wanted to grow the reach of the corporation and connect better with consumers. Now, that's a much more interesting challenge, and something we could help with."

Explains Canniffe, "Design is not just a logo or poster."

It's not just identifying a problem, either. Design, he says, is deep listening plus critical thinking *plus* imagining on a grand scale.

It's how Canniffe teaches graphic design students to approach problem-solving, beginning with developing an

understanding that design is much more than providing a service. The approach is not only vital to graphic design students' future success, he maintains it's vital to the future of our society.

"Research shows the middle class is shrinking," Canniffe explains. This means designers will be needed less and less to design the ads, brochures and flyers that market products to this core group, and instead must create value elsewhere. Indeed, he predicts design jobs will disappear altogether unless designers learn to identify necessary change and then lead it, whether for businesses or for nonprofit organizations and communities.

After their initial conversation, Canniffe and Fareway representatives engaged in deeper discussions about the potential for design that would produce the change the company sought. Soon after, he accepted the job on behalf of his "Design for Behavioral Change" graduate studio. The students delved into the problem, identifying the Midwestern values Fareway and its customers shared, and imagining ways to position and promote the new venture.

According to Canniffe, projects like these help students see design as more

# DESIGN THAT MAKES A DIFFERENCE

By Susan Flansburg

than a simple service in a world where globalization and rapid change outpace civic policy creation that takes years to craft and implement. "Policy-makers are incapable of solving the complexities of problems communities are facing. They can't react fast enough."

Fareway's Midwest Quality Wholesale brand development did in fact involve a new logo and website, as well as other collateral informed by extensive research and interviewing on the part of the student designers.

Canniffe says the project allowed them to experience design as an organic and useful catalyst for behavioral change.

"I want students to understand that design is a tool that can be used for good, that design has consequences.

I want them to be design ambassadors to the world, and to have competitive advantage as they graduate," he says.

"Iowa State graduates will be able to place cultural understanding into design, typography and photography, and work that into the context of design. They will be able to bring a creative strategy with them, as well as their work."



**➔ Artist and benefactor**

Dorothy Maitland Miller earned her applied arts degree from Iowa State in 1952 and headed to Kansas City to work as an artist for Hallmark Cards before joining Meredith Corporation in Des Moines as a graphic artist for Better Homes and Gardens magazine. She was a founding and the first female member of the Art Directors Association of Iowa.

Miller previously established scholarship funds in her name to provide in-state tuition scholarships for sophomores, juniors or seniors in the department of graphic design. She died in 2014.

**“DESIGN JOBS WILL DISAPPEAR ALTOGETHER UNLESS DESIGNERS LEARN TO IDENTIFY NECESSARY CHANGE AND THEN LEAD IT.”**

- BERNARD CANNIFFE





## FROM INQUIRY TO IMPACT

The Griswold Undergraduate Research Interns program helps students connect lab research to real solutions to real problems.

By Steve Sullivan | Photo by Chris Gannon



➔ **Change reaction**  
A “cool” part of Griswold Intern **Sarah Jacobson’s** experience in the Narasimhan lab is operating an omnibot and working with doctoral researchers like **Adam Mullis**, left.

SARAH JACOBSON ARRIVES AT THE LABORATORY, dons her white coat and safety glasses, checks the day’s notes and starts working.

Later, she will attend a discussion of complex issues involved in ensuring the discoveries arising from the work happening in research labs make it into the marketplace where they can do the most good.

You might think Jacobson works for a major corporation. She doesn’t – at least not yet. She’s an Iowa State junior majoring in chemical engineering, and a member of the Griswold Undergraduate Research Interns program, established with a gift from Gary and Mickie Griswold.

An experiential learning opportunity for chemical engineering students, Griswold Internships enable students to work alongside faculty and graduate students, contributing to significant scientific work as they gain knowledge about the research process. The program “provides resources for more undergraduates to get research experience on campus,” says Dennis Vigil, professor and associate chair of chemical and biological engineering.

Further setting the program apart are seminars introducing students to the process for transferring the innovations created in Iowa State labs to benefit society. Interns learn the basics of intellectual property, or IP, and of patent, trade secret, trademark and copyright law and practice.

“We are helping these students develop skills as documentarians of their work,” Vigil says, which is an important aspect of protecting research and discoveries.

Jacobson is part of a team led by Balaji Narasimhan, Anson Marston Distinguished Professor and Vlasta Klima Balloun Chair, that seeks to



➔ **From ChemE to IP**  
**Gary Griswold’s** legal career began in an Iowa State chemical engineering lab. Doing research here, notes Griswold, a 1967 chemical engineering alumnus, played a pivotal role in his becoming a lawyer specializing in patent law and protecting researchers’ intellectual property. This, in turn, inspired him and his wife, **Mickie**, to establish the Griswold Undergraduate Research Interns program. The program, the first of its kind in the department and the College of Engineering, so far has provided 17 chemical engineering undergraduates with rich, hands-on lab experience as well seminars on intellectual property.

identify novel biodegradable polymers for nanomedicine and nanovaccine applications. Jacobson’s work involves operating an “omnibot” that distributes chemicals into containers in exact measurements. This is the “cool” part of being a Griswold Intern. The eye-opening part, though, is the IP education.

“I had no idea this aspect of research even existed,” Jacobson says. “It’s exciting if you patent something, but also really difficult because you could step on some other researcher’s toes, or someone could get there before you.”

Griswold Intern John Lavey agrees. “I now know the importance of protecting the work we are doing,” he says. “It’s useful to have that mindset, of realizing that your project could become a product” that could ultimately impact people’s lives.

Lavey works with Vigil’s team on an advanced fluid dynamics project aimed at growing microalgae that could serve as an alternative biomass resource. Lavey is conducting computer simulations of algae growth.

“I’ve been doing fluid dynamics research since last spring – that’s a full year of experience before even taking a fluid dynamics class,” he says.

Likewise, Jacobson began a chemical engineering lab course having already been exposed to taking lab notes, keeping a research notebook and following safety protocols. The Griswold Internship has also changed her future plans.

“Knowing that I’m doing something that possibly hasn’t been done before is exciting to me,” she says. “I originally wanted to go to school for four years and then get a job. Now I am thinking graduate school because I want to keep doing research.”



IMPACT



Contributed photo

**HELPING LAUNCH A SUCCESSFUL CAREER**

"I was an out-of-state student from Minnesota, and without the support of scholarships I wouldn't have been able to attend Iowa State. This scholarship allowed me to graduate without any student loans, and it gave me the financial freedom to purchase my first home at the age of 24."

— **Jill Cattrysse**, B.S. aerospace engineering, 2003. Cattrysse currently is the GOES-R mission operations and software manager at Lockheed Martin. GOES-R is the nation's newest series of weather satellites, and through them, Cattrysse and her team are improving weather prediction and saving lives. While attending Iowa State, she received the Harold Langford Scholarship in Engineering and the David C. Moll Scholarship in Engineering.



**Partner for progress**

The Land O'Lakes Foundation has made a \$5 million commitment to Iowa State University that will improve the quality of an Iowa State education, attract and retain top faculty and research talent in supply chain management, and inspire innovation in key areas on Iowa State's campus.

A significant portion of the gift will support construction of the Student Innovation Center. Also provided for are scholarships for students in the College of Agriculture and Life Sciences and establishing a named endowed professorship in the Ivy College of Business for a faculty member who will elevate Iowa State's top-rated supply chain management program.

"We're excited at Land O'Lakes to be able to increase the investment in our partnership with Iowa State. It is particularly rewarding to support a facility that will provide students with real-world experience in the areas of entrepreneurship and teamwork," said Chris Policinski, President and CEO of Land O'Lakes, Inc. "Land O'Lakes is appreciative of the strong relationship we've built with Iowa State over the years, and we look forward to the next chapter in that partnership."

**BRACING FOR IMPACT**

Offering practical, hands-on learning opportunities is a hallmark of Iowa State, and the Biomedical Engineering Society is a prime example of such efforts. The student organization's current project is focused on designing and building a brace for patients who suffer from Duchenne's Muscular Dystrophy.

**Olivia Tyrrell**, a freshman studying mechanical engineering and recipient of the Raymond A. and Kathryn A. Engel Fund for Mechanical Engineering, said she joined the group because she's interested in the medical field and wants to experience firsthand the processes behind creating products that will have a direct impact on people's lives.

"It is really exciting to see our project come together and imagine the applications it could have for real patients," Tyrrell says. "Even though I'm just a freshman, it's been easy to dive into the research and get involved with the decision-making."



Photos: Paul Gates

ACCOLADES

**Defining distinguished**

Illustrious, renowned, eminent – all are synonyms for distinguished. Although they would not describe themselves as such, the following alumni and friends well deserve such recognition for their outstanding contributions to the university by the Iowa State University Foundation and the Iowa State University Alumni Association during the annual Distinguished Awards Celebration.



Photo: Jim Heemstra

**(l. to r.) Row 1:** John Schuh, Honorary Alumni Award; Dick Horton, Order of the Knoll Faculty and Staff Award; Marla (Warrick) Franklin, Order of the Knoll Cardinal and Gold Award; Clay Lindwall, Vice President, Government Systems Engineering, Rockwell Collins, Inc., Order of the Knoll Corporation and Foundation Award; Richard Carmichael, Distinguished Alumni Award; Ana Hays McCracken, Order of the Knoll Campanile Award; Wendy Wintersteen, President, Iowa State University

**Row 2:** Larissa Holtmyer Jones, President and CEO, Iowa State University Foundation; Debbie Bergstrom, Honorary Alumni Award; Sandy Horton, Order of the Knoll Faculty and Staff Award; Suku Radia, Distinguished Alumni Award; Jennie Greimann, accepting the Order of the Knoll Faculty and Staff Award on behalf of the late Lowell Greimann; Ed McCracken, Order of the Knoll Campanile Award; Barbara Janson, Distinguished Alumni Award; Jeff Johnson, Lora and Russ Talbot Endowed President & CEO, Iowa State University Alumni Association



Contributed photos

**A TAIL-WAGGING GIFT**

It's been said that dogs are not our whole life, but they make our lives whole – a notion that rings true for two sisters who have chosen to give back to Iowa State's College of Veterinary Medicine in honor of their beloved companions.

The sisters brought each of their German shepherds to the Hixson-Lied Small Animal Hospital for care throughout the dogs' lifetimes, and were especially grateful for the continuous care one of their dogs, **Dasani**, received when treated by faculty and staff in the dermatology service and canine rehabilitation facility. In appreciation, earlier this year the sisters established the German Shepherd Dog Memorial Fund for Support of Small Animal Dermatology, which will provide support for resident training in small animal dermatology.



NOTABLE QUOTES

"This named position is really special because it's an affirmation and a validation of a pursuit of excellence in the classroom. I'm thankful and touched by the generosity of the kind gift that makes this possible."

— **John Wong**, associate professor of marketing and inaugural holder of the Dean's Professorship in Sales and Marketing



"It is an honor and a significant responsibility to receive the Dr. Roger and Marilyn Mahr Professorship in One Health. The professorship gives an increased level of stature to the One Health program at the university and will further advance our foundational strengths in research, education and outreach."

— **Claire Andreasen**, professor in the department of veterinary pathology, director of One Health and inaugural holder of the Dr. Roger and Marilyn Mahr Professorship in One Health



"The education I've received through the Vermeer International Leadership Program has redefined my perception of leadership, which is a word that is often misunderstood in our current society. Leadership has more value to me now because I recognize that it is not about the authority to manage people; it is the skill of solving challenges that other people don't want to acknowledge exist. Knowing this distinction has given me a hunger and determination to do more to address the challenges we have in our world, and the Vermeer Program has shown me how to begin."

— **Jaclyn Stiller**, junior, industrial engineering, who, with the support of the Vermeer International Leadership Program, traveled to the Netherlands over spring break to meet with Vermeer professionals and learn about global leadership.



"I love when the research supports the teaching and the teaching supports the research. I think the biggest impact we can have is on the students. The influence we have on them and the influence they then have on our community, our state and the world is tremendous."

— **Frank Peters**, associate professor of industrial and manufacturing systems engineering and inaugural holder of the C. G. "Turk" and Joyce A. Therkildsen Professorship in Industrial and Manufacturing Systems Engineering



TRULY AMAZING

Since the beginning of the *Forever True, For Iowa State* campaign, **79 new endowed faculty positions** have been created, and **20,563 students** have received monetary support from generous donors like you. Thank you!

NEWS

COUNTRY CLASS

What do Iowa State and country music sensation **Luke Bryan** have in common? They are both known for their advocacy of agriculture. This spring, Bryan donated \$8,000 in scholarship support to the College of Agriculture and Life Sciences for agriculture students from a farming family. Two outstanding students were selected to receive scholarships.

Bryan, who grew up in a farm family, understands how challenging it can be. He chose to donate to Iowa State after performing in September 2017 at the Ziel family farm in Boone County as part of his ninth annual Farm Tour. After a concert, Bryan will sometimes pick the closest agricultural school for a one-time gift.

According to Andy Zehr, director of marketing and new student programs in the college, "There was absolutely no expectation of any sort of recognition. It really seemed to be given in the spirit of wanting to help."



Contributed photo

ESSENTIAL SUPPORT FOR ESSENTIAL LEADERS

For first-year students, becoming involved in one of Iowa State's 90 learning communities helps ease the transition to college life and serves as a gateway to success. Since 1995, more than 75 percent of incoming freshmen have participated in a learning community – including 83 percent of first-year students of color. A crucial component of the learning community program is the leadership of undergraduate peer mentors, a group of some 600 returning students who lead teams of 12 to 20 students. Upon former program director Doug Gruenewald's retirement in August 2016, his colleagues and peers established the Doug Gruenewald Peer Mentor Scholarship for these essential student leaders. The \$500 need-based awards provide support to peer mentors to help keep their own educations on track to graduation.



Photo: Paul Gates

A IS FOR "ABC IT'S ALL MEDICAL TO ME"

While brainstorming ideas for her honors capstone project, Carlee Cutler knew she wanted to use what she'd learned in the community and public health emphasis of her kinesiology program. So she decided to create a children's book to help reduce the fear and anxiety that young children can experience when going to the doctor. The hardcover book combines research and writing vetted by literacy experts and medical professionals, with child-friendly illustrations created by one of Cutler's sorority sisters. "For my project, I wanted to try something that hadn't been done before," she says. "I knew it would be challenging, but I had so much fun diving into a new field." She is looking at publishers for her book and hopes that families and doctor's offices alike will find it beneficial.

The May graduate, who received donor support while a student including the Germaine Guiot Scholarship, is currently attending nursing school and hopes to someday specialize in neonatology and women's health, working with high-risk pregnancies.



# THE SECRET OF HER SOCKS-CESS

By Karol Crosbie | Photo: Chris Gannon



WHAT DOES IT TAKE NOT ONLY TO BE an entrepreneurial success, but to do so meaningfully? *Forward* asked Rebecca Lyons, a 2018 graduate in agricultural studies, with a minor in entrepreneurial studies. Last year Lyons, a Ryan Pellet Family Scholarship recipient, launched Lunchsox, which sells kooky socks online with names like “vintage retro strawberry,” “rusty Tannenbaum” and “chocolate-toed Scandinavian,” with 100 percent of profits going to buy lunches for hungry kids.

### Be open to different solutions

“I was pursuing a concept for an entrepreneurial class that involved an idea I’d had about farming, which I postponed. But I’d been to Zimbabwe on a campus ministry trip and had seen the effects of hunger. I wanted something that was manageable and helped people, and came up with Lunchsox.”

### Let your ideas evolve

“In 2017, Lunchsox was able to give more than \$1,000 to the Critical Care Center in Chinhoyi, Zimbabwe. This year, proceeds will go to the school system where I grew up in Clinton, Iowa. More than 50 percent of the children qualify for the school’s public supported lunch program. Lunchsox is partnering with a program called Backpack Buddy, where food is sent home over the weekend, so that kids return on Monday morning with their tummies full and their minds ready to learn.”

### Know yourself

“I grew up on a dairy farm, where every day is different, and I love that kind of lifestyle. I’m interested in a career where I can work with people, and no two days are alike. Success means understanding what you’re good at and what you enjoy. I’ve learned that I really like the creative part of entrepreneurship – public relations, graphics, design, photography.”

### Be open to new opportunities

“For one of my entrepreneurship classes, I interviewed a former classmate and peer mentor, Mikayla Sullivan. She co-founded KinoSol, which markets a small, solar-powered dehydrator that allows farmers in developing countries to preserve what they grow. She told me there was a position open for marketing coordinator. ‘Apply for it!’ she said. I did, and I got the job, and I love it. It turns out I’m not just a socks person. I like wearing many hats.”

### Be flexible

“There’s no straight line to success. For one thing, that would be boring! It’s the interesting little paths that you take that determine your success. I’m not sure what’s next for me. But while I might not know what I want to be, I do know who I want to be. I want to make a difference.”

To suggest food program partners, go to [www.lunchsox.com/our-story](http://www.lunchsox.com/our-story).

Illustration: Evanny Henningsen

# WAYS TO GIVE

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

Tom and Evonne Smith



Iowa State leads you into an appreciation of the world and our place in it. At Iowa State, we were inspired to discover – first about ourselves, then later the majors that most appealed to us. Our giving has focused on how we can enrich the environment for young women and men to become passionate about the fields they’re discovering. We want to help them so they may be as blessed as we were in our educational experience at Iowa State.

– **TOM** (B.S. 1968, M.S. 1971 geology) and **EVONNE** (B.S. 1968 textiles and clothing) **SMITH**, whose giving established the Evonne Smith Endowed Fund for Excellence in Apparel, Merchandising and Design and the Smith Family Foundation Departmental Chair in Geology, as well as enabled major improvements to be made at the Carl F. Vondra Geology Field Station in Wyoming.

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# Why are you FOREVER TRUE?

These are just a few of the many students, faculty and staff members expressing their thanks to generous alumni and friends, and sharing why they're #ForeverTrueISU during **Forever True Week** in April, which celebrates the many ways donor support makes a difference on campus and to the Iowa State experience.



### Forward

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