

CHANCELLOR'S REPORT 2018

In a year marked by change, we celebrate the excellence that remains a constant at KU.



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that remains a constant at KU. Left: Chancellor Douglas Girod enjoys a moment with Juan Manuel Santos, president of Colombia. A KU alumnus, Santos returned to the university in 2017 to receive an honorary degree, Doctor of Humane Letters.

> Below: Girod participates in a discussion of the 2017 KU Common Book, Citizen: An American Lyric, by Claudia Rankine.



# **SHIFTING GEARS**

Left: Girod rouses Jayhawk football fans at the 2017 KU Kickoff in downtown Lawrence.

Below: On the eve of the first day of classes, Girod addresses students at his first Opening Convocation.







**New Leadership** 

FROM THE DAY Douglas A. Girod was named the 18th chancellor of the University of Kansas, he has been clear about his three priorities: improving the student experience, expanding state outreach, and growing KU's research enterprises.

It's through these key areas of focus, he said in his first letter as chancellor, that we will "elevate KU's national stature, attract the best students and researchers, and enhance our status in the Association of American Universities."

But don't misread his determination. In person, he's easygoing and approachable. He's been a Jayhawk for nearly 25 years. He was the KU Medical Center's executive vice chancellor and, before that, chair of KU's otolaryngology-head and neck surgery department. Faculty respected him for his leadership; students related to him because of his interest in motorcycles and sports cars.

Now, nearly a year into his time as chancellor, he is still finding sup-

port from the university community. "People have been so welcoming," he says. And despite the rigorous new work schedule, he and his wife, Susan, reserve each Sunday for family get-togethers with their three grown children.

You can expect Girod to be just as consistent — and committed and compassionate — as KU chancellor.

"I really want to see KU reach its full potential. We have the size, we have the tools, and we have the flexibility." ■

#### **NEW LEADERSHIP**



Dean of the School



of Social Welfare











Vice Provost for

Senior Vice Provost Diversity and Equity Faculty Development for Academic Affairs



# Like a sparkling jewel, the five-story cantilevered glass cube

glistens with promise at 39th Street and Rainbow Boulevard in Kansas City, Kansas.

KU Medical Center's new Health Education Building, which opened its doors to students in July, is now the primary teaching facility for the KU schools of Medicine, Nursing, and Health Professions.

Designed and equipped to transform medical education in Kansas, the building also puts KU into position to take on a major Kansas problem — the critical statewide shortage of physicians, nurses, and other health care professionals.

The 170,000-square-foot building accommodates a modern medical curriculum, one that emphasizes small group, interdisciplinary problemsolving. Students studying to be physicians, nurses, and other health care professionals are trained to work as a team to improve patient outcomes.

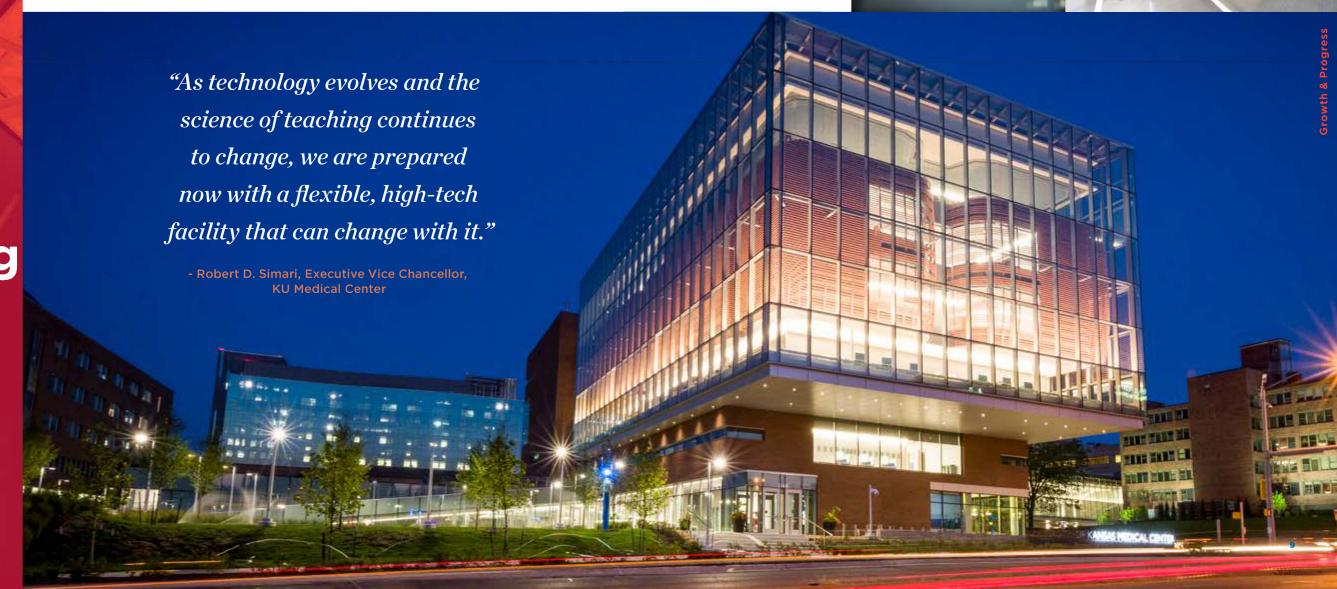
Several of the floors are dedicated to experiential learning, the process of learning by doing. A home care laboratory supports training for home-based services — a recognition that not all health care takes place in hospitals and clinics.

The \$82 million Health Education Building was constructed with funds from the state and the medical center and with private gifts raised through KU Endowment.

Story continues



KU is breaking new ground.



#### **Story continues**

#### **Nursing program expands to Salina**

In central Kansas, another KU teaching facility opened its doors to health care students last summer. Twelve nursing students began their studies in July at the School of Nursing's newly established Salina campus.

The dozen nursing students share space with students from the KU School of Medicine-Salina but will move to a new medical education facility in July 2018.

The renovation and reconstruction of a former Bank of America branch in downtown Salina will expand the existing educational space and accommodate current and future needs of the medical and nursing programs.

#### **Rehab lab simulations**

The School of Health Professions opened the Laboratory for Advanced Rehabilitation Research in Simulation (LARRS) — which uses virtual reality to test and improve the automotive driving abilities of those with central nervous system conditions such as stroke, Parkinson's disease, and multiple sclerosis. LARRS also tests patients with visual, cognitive, and behavioral conditions who need to get medical clearance to drive.

Besides a driving simulator, LARRS includes a virtual reality treadmill, two eye trackers, and several visual and cognitive screening tools. ■

# Central District completion

The Central District redevelopment will be completed in 2018 with the opening of the final four buildings: the 280,000-square-foot Integrated Science Building, the Stouffer Place Apartments complex, the Frank R. Burge Student Union, and a new central utility plant. Cora Downs Residence Hall opened in August 2017, along with a new dining commons connecting it to Oliver Hall. The parking garage was finished in spring 2017.

#### Athletic improvements

Kansas Athletics' fundraising project, "Raise the Chant," aims to enhance football, basketball, volleyball, and baseball facilities. Plans include construction of an indoor football practice facility, and multi-phase improvements to Memorial Stadium — fan suites and lounges, expanded concourses and viewing decks, premium seating options at all price points, and reserved chair-back seating.

#### EEEC opens

The \$78.5 million Earth, Energy & Environment Center opened for classes in spring 2018. The center's two halls, Ritchie and Slawson, are linked to each other and to Lindley and Learned halls with a tunnel, pedestrian bridges, and a skywalk that spans Naismith Drive. The bridges accommodate interdisciplinary study and research in energy and the environment, geology, and engineering.

#### Summerfield makeover

The Department of Film & Media Studies has moved from Oldfather Studios to a renovated Summerfield Hall, the former business school building. The remodeled facilities include a new soundstage, a recording studio, production classrooms, a larger computer lab, department offices, and a media library. Summerfield also houses the new Lt. Gen. William K. Jones Military-Affiliated Student Center, the Undergraduate Advising Center, and the University Career Center.



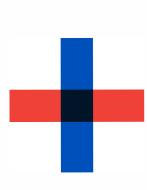
#### Where did the grotesques go?

Dyche Hall's weather-beaten limestone grotesques have been taken off their exterior perches as part of the renovation of the 115-year-old building. The \$4.2 million state-funded project will restore much of the building's original splendor while bringing its research and collection facilities in line with established conservation standards. The eight grotesques of mythical animals are on display inside the Natural History Museum, which is raising funds to replace them with exact replicas.



Joanna Slusky built a tool so tiny, she can't see it even under an electron microscope.





**Story continues** 

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Besides a driving simulator, LARRS includes a virtual reality treadmill, two eye trackers, and several visual and cognitive screening tools. ■ Armed with nanoscale tools of her own making, Joanna Slusky is going after global problems like antibiotic resistance, cancer, and even cleaning up oil pipeline spills. "My interest is making the world better," says Slusky, an assistant professor of computational biology and molecular biosciences. "All of these things are fundamental biological problems that we want to fix. So, we're going to use what's in the biological chemical tool kit, which are proteins." A protein she invented called s1245 — it's so small she can't even physically see it — has been her An unexpected discovery made two years ago in her modest fourth-floor lab in Haworth Hall found s1245 could provide the answer to defeating emerging bacterial "superbugs." Those are microbes that have evolved a resistance to today's antibiotic drugs, a frightening problem predicted to kill more people than cancer by 2050. The promise of Slusky's s1245 protein research caught the attention of the science world. It led to Saky winning an \$825,000 Moore Inventor Fellowship last summer. And last fall, the 38-year-old scientist won a five-year \$2.3 million New Innovator Award, aimed at earlyresearchers, from the National Institutes of I Slusky, who also teaches graduate and

Slusky, who also teaches graduate and undergraduate classes, is using the NIH funding to buy high-precision nanoscale measuring equipment and a 3-D printer to help visualize the proteins and hire a few more scientists. She'll train them and direct more experiments to better understand and scientifically document how s1245's molecular-level mechanisms break down a bacteria's defenses against antibiotics.

"Hopefully we'll be able to save lives that are threatened by antibiotic resistance with this," she says. Meanwhile, her lab team will push the science forward as they create all kinds of new proteins to solve all kinds of other problems.

"We work on oil spills. We're trying to work on biosensors. We're trying to understand evolution," she says. And using proteins, they'll attack the big questions one small piece at a time.

Joanna Slusky built a tool so tiny she can't see it, even under an electron microscope.

# STILL LIFE

When conservators at Kansas City's Nelson-Atkins Museum of Art found the remains of a grasshopper hidden in the paint of Vincent van Gogh's Olive Trees, they started looking for a deeper meaning.

Above: Vincent van Gogh, Olive Trees, 1889, The Nelson-Atkins Museum of Art.

Detail at right: The grasshopper skeleton in the lower foreground of Olive Trees is so embedded in deep brush strokes that it is visible only under a microscope.

For example, could identifying the species of the grasshopper pinpoint exactly where and what time of year the painting was created?

So they called an expert, Michael S. Engel, a professor of ecology and evolutionary biology at KU.

> The grasshopper remains were too fragmented for Engel to determine the species. But it wasn't a total scholarly bust. The artist's brushstrokes show that the insect was dead before landing in the paint. They also suggest that van Gogh noticed the grasshopper on the canvas and subsequently attempted to obscure it with paint. without disrupting his composition.

The results of Engel's ongoing investigation will be included in the 2019 catalog of the Nelson-Atkins' collection of French paintings.



Carnegie research Cecilia Menjívar, Foundation Distinguished Professor of sociology, used her recent \$200,000 Carnegie Fellowship award to expand her groundbreaking immigration research. Menjívar was the second KU faculty member to win the prestigious national award.

#### Public trading

Savara Inc., one of 38 active startup companies based on KU research, is the first to be traded on a public stock

exchange (NASDAQ: SVRA). Founded to create treatments for rare lung diseases, Savara spun out of the research of Cory Berkland, a distinguished professor of pharmaceutical chemistry and of chemical and petroleum engineering.

#### Education honors

Subini Annamma, assistant professor of special education, received the 2017 Early Career Award from the American Educational Research Association, and Kathleen Lynne Lane,

professor of special education, received the 2017 Kauffman-Hallahan-Pullen Distinguished Researcher Award for outstanding scientific achievements over her career.

#### Year of the new rat

Professor of ecology and evolutionary biology Robert Timm and research associate Ronald Pine were involved in the discovery of a new mammal on Manus Island in the Pacific Ocean. The mammal, which they named Rattus detentus,

was featured as a top scientific find in Discover magazine's "Year in Science."

#### Life-saving vaccine

The School of Pharmacy is a partner with MIT and University College London on a vaccine project that could save millions of lives. The three schools have received a \$17.6 million grant from the Bill and Melinda Gates Foundation to develop and produce a low-cost vaccine manufacturing platform to be used by developing countries.

#### **Frontiers: Where** medical discovery becomes reality

Frontiers, University of Kansas Clinical and Translational Research at KU Medical Center, has had its five-year \$24.9 million grant — the largest grant at KUMC - renewed by the National Institutes of Health. Frontiers, which is a network of regional and Kansas health care researchers, will use the grant to continue to transform health care discoveries into treatments. Frontiers is among a select group of about 60 university programs in the nation funded by NIH grants.

"The impact of this grant goes far beyond its direct funding, as it will spark new ideas, collaborations, and innovations."

- Chancellor Douglas A. Girod







V Story continues

In exchange for carbohydrates, mycorrhizal fungi capture nutrients from the soil for their green hosts.

And some also shield their plant partners from pests, diseases, or even acidic and salty content.

"These fungi are very beneficial," says James Bever, KU Foundation Distinguished Professor of ecology and evolutionary biology. Bever is a key scientist in a new NSF project to study these and other microorganisms in the microbiomes found in plants, soil, and lakes and streams that receive water from the surrounding landscapes.

"What we're trying to do is understand how to maximize the microbiomes' benefit," Bever says. "It's a tall order."

For example, they might be used to boost crop and pasture production. Or revitalize degraded agricultural lands. Or conserve native grasslands. Or even clean up polluted waterways and curtail greenhouse gases.

The MAPS team of about 25 plant ecologists, microbiologists, aquatic ecologists, and theoreticians will conduct interconnected experiments across Kansas.



From the wettest regions in the east part of the state to the driest in the west, the team will take samples to analyze the microbiomes of various aquatic and soil landscapes —agricultural land, post-agricultural land, and even pristine native prairies.

Bever co-leads the MAPS team with Sharon Billings, KU professor of ecology and evolutionary biology and a senior scientist at the Kansas Biological Survey, and K-State professors Chuck Rice and Walter Dodds. While Bever focuses on plant microbes, Billings specializes in soil microbes, another entire kingdom of microscopic heroes.

"We will definitely find new things," Bever says. "There's just so much yet to be discovered."

#### MAPS basics

The five-year, \$20 million Microbiomes of Aquatic, Plant and Soil Systems Across Kansas (MAPS) project is funded by the National Science Foundation. The statewide initiative includes researchers from KU, Kansas State University, Wichita State University, Fort Hays State University, and Haskell Indian Nations University.

Kristin Bowman-James, a KU distinguished professor of chemistry, is overseeing the MAPS project as director of the NSF's EPSCoR (Established Program to Stimulate Competitive Research) office in KU's West District.

In addition to field research, the grant will be used for outreach to the next generation of scientists — introducing microbiome research projects to elementary and high school classrooms and creating a summer research internship program for Native American students interested in science fields.

#### **SERVICE TO KANSAS**-More stories from 2017

## Analytical boot camp

KU Professional & Continuing Education has launched professional leadership programming and KU Boot Camps on coding and data analytics on the Edwards Campus. The leadership courses — some available in webinars and workshops — cover business presentations,

communications, project management, quality management, and science and technology. The coding boot camp is a part-time, 24-week course that covers full-stack web development. The data analytics boot camp is a part-time 24-week course that teaches students to translate data into insights quickly to solve real-world problems.

The boot camps are expected to graduate more than 200 students a year.

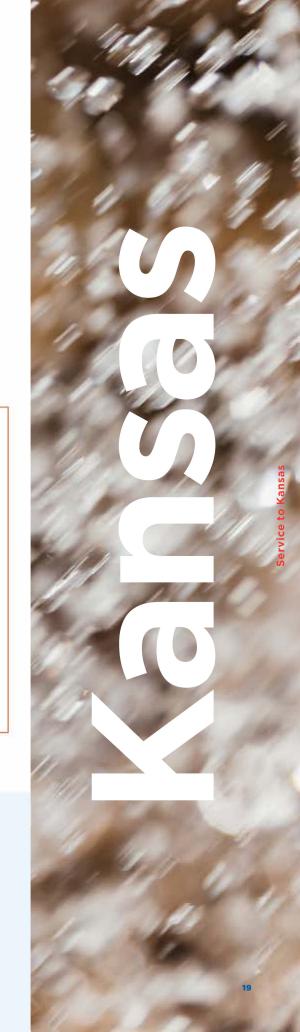
## Leavenworth expansion

Nearly 70 students now attend KU late-afternoon and evening classes in Leavenworth or Fort Leavenworth. The off-post programs began in fall 2016 to complement and benefit military and civilian careers. In as little as 10 months, students can earn a master's degree in project management, homeland security law and policy, business and organizational leadership, supply chain management and logistics, and global and international studies.

### Serving the underserved

During the next four years, KU will turn out more than 100 master's-level social workers to help fill open positions in behavioral health in rural and other underserved areas throughout Kansas. The School of Social Welfare has secured a federal \$1.85 million, four-year award from the Health

Resources & Services Administration to launch the Integrated Health Scholars Program, which will support scholarships for 28 master's-level social work students per year at the school's campuses at Garden City Community College, Fort Hays State University, and the Lawrence and Edwards campuses.





We climb
the Hill to
reach new
heights.

Jayhawks continue to excel.







# STAYING IN THE FLOCK

sophomores are returning to the Hill in record numbers. Incoming students are better prepared and more diverse than almost any other KU freshman class.

In recent years, KU has taken initiatives to first identify students who would find KU to be a good fit, developed new admission standards that attract high-achieving students who are looking for challenging learning opportunities, and expanded national and international recruiting efforts to create a more diverse campus community.

KU has also developed programs that enhance a student's academic and social transition from high school to college. A refreshed core curriculum emphasizes collaborative, handson learning, undergraduate research, internships, and studying abroad. Such experiences help students develop early skills and competencies they can carry with them toward earning a degree and then moving on to graduate school or the workplace.

KU is also working to help students complete their course work and graduate. Courses are being redesigned. Academic advising is stronger. Processes have been streamlined.

Meanwhile, KU strategists continue to make improvements. They are studying data with predictive analytical modeling — a sophisticated tool that gives them even more insights how to improve student life on the Hill in the future.



In fall 2017:

83 percent retention rate of students who had entered the previous year was KU's highest ever.

Incoming freshman class had the highest average high school GPA and the secondhighest average ACT score of any class in KU history.

Freshman class included 23.6 percent minorities, the highest ever of any entering KU class.







#### **Endowment records**

KU Endowment provided a record \$185.3 million to KU in FY 2017, which included support to two major construction projects: the Health Education Building at KU Medical Center and the Earth, Energy & Environment Center in Lawrence.

Private donations through the Endowment Association also created 88 new scholarships and fellowships and seven new professorships.

#### The birth of a collection

KU celebrated the 100-year anniversary of Sallie Casey Thayer's 1917 gift of her 7,000-plus-piece art collection to KU with an exhibit about using art to enrich higher education. Thayer's extensive collection was the foundation of what is today the Spencer Museum of Art, which has more than 45,000 objects in its collection.

#### Best for vets

KU is among the top five schools in the country for veterans and military-affiliated students. KU jumped from 10th place in 2016 and 2017 to the No. 5 spot in the Military Times: Best Colleges 2018 ranking, which rated services and rates of academic achievement at more than 600 colleges.

#### Textbook initiatives

KU is one of 11 university partners of Open-Stax, a program that supports free, peerreviewed textbooks for college students. The OpenStax partnership is an important part of KU's much broader and increasingly campus-wide initiative to utilize open textbooks and open educational resources (OER) to save students money and support innovative pedagogy.

KU also offers small grants up to \$5,000 to KU faculty to adopt, adapt, and create OER and open textbooks as part of its overall OER strategic plan.

#### Law school rankings

KU's School of Law has won national recognition in three major rankings. The law school's moot court program was ranked 17th in the nation, finishing in the top 20 for the second year in a row. For its more than 18,000 hours of student pro bono work, KU made PreLaw Magazine's Community Service Leaders honor roll for "schools with the greatest community impact." KU has also made Business Insider's list for the 25 best public law schools in America.

Alberto Araujo, a graduate student at the KU School of Journalism & Mass Communications, was a member of the Pulitzer Prize-winning team that led the Panama Papers, a journalistic investigation into massive offshore tax havens.

Taylor Zabel, a junior studying biochemistry, received the Harry S. Truman Scholarship. Zabel was one of 62 juniors named last year, and KU's 19th Truman Scholar.

KU received one of 10 national grants from the American Association of University Women. The grant helps empower women in science, technology, engineering, and mathematics, with this year's focus being the gender leadership gap.

Sophomore Mattea Keister, a biochemistry major, and sophomore Zachary Wood, a chemistry major, were named KU's 2017 Beckman Scholars. The \$21,000 scholarship provides meaningful research opportunities for students in the departments of Chemistry or Molecular Biology.

Bridget Cho, a doctoral student in clinical child psychology, is one of 15 students nationally to receive a Doris Duke Fellowship for the Promotion of Child Well-Being. The \$30,000 award supports her research on developmental effects of childhood adversity and parenting behavior.

Tomas Green, a junior in chemical engineering with a minor in public policy, received a Udall Scholarship for his work in environmental policy and sustainability. The scholarship rewards 50 students nationally for their commitment to issues related to Native American nations or the environment.

The KU Wind Ensemble was selected to perform at the prestigious College Band Directors National Association Conference. "This is one of the highest honors a college concert band can receive," says Paul Popiel, leader of the 71-member ensemble.

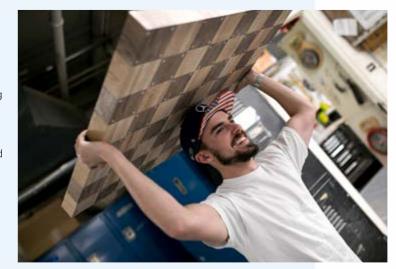
The KU Jazz Ensemble I was one of six big band jazz ensembles invited to perform at the 47th Annual Next Generation Festival. The event, which is presented by the Monterey Jazz Festival, draws many of the nation's top student musicians.

For two years in a row, KU master of accounting graduates — Devenie K.

Ross and Nicole Lauren Jones — have earned the American Institute of CPAs' Elijah Watt Sells Award for their extraordinary scores. In 2016, 102,323 people took the Uniform CPA Examination, and only 58 met the award's notoriously difficult criteria.

#### **Built by design**

Classes from two schools that jointly use Chalmers Hall collaborated on the renovation and expansion of the building's Art & Design Gallery and gathering space. Third-year architecture students did the design and construction. A design class contributed environmental graphics. And a sculpture class in the School of the Arts designed inlaid wooden tabletops and furniture that increased the functionality of the space.



# AD ASTRA

EVEN AS A KID, Loral O'Hara wanted to explore. The Earth. The sea. The stars.

"I was never really content with the idea of working in an office every day," she says.

After earning a degree at KU in 2005, O'Hara went on to graduate work at Purdue and took on several engineering assignments. Most recently, she developed subsea projects at the Woods Hole Oceanographic Institution in Massachusetts. She earned a private pilot's license and certifications as a wilderness first responder and an EMT.

She first applied to NASA when she was still too young to meet basic requirements as an astronaut, but last year, she finally received the call from NASA that she'd been selected as a 2017 astronaut candidate.

O'Hara credits KU with helping her on the road to the stars. Her professors helped her earn an internship at the Jet Propulsion Laboratory, and the following year a Kansas Space Grant funded her attendance at the NASA Academy. These programs, she says, gave her "an appreciation for the technical, political, and social challenges associated with space exploration."

Even now, her training doesn't include much time in the office. Instead, she's flying T-38 trainer jets and learning Russian.

"That's the most surprising aspect of my training — how much I enjoy learning to speak Russian," she says. "I'm excited to work with our Russian colleagues down the road."

A flight assignment is still a few years out. It could be a stay at the International Space Station, a trip to the moon, or exploring deeper space.

"Right now I'm just focused on acquiring a broad range of skills that would be applicable to any expedition. Beyond that, I would be excited for any mission assignment."

For Loral O'Hara, the sky isn't the limit. ■



## Who says Jayhawks are flightless birds?

Loral O'Hara isn't KU's only astronaut grad. First were Ron Evans and Joe Engle, both School of Engineering graduates. Evans was the command module pilot on Apollo 17, Engle the commander of the second space shuttle flight. The third was Steven Hawley, who was a mission specialist on five space shuttle flights and is now a KU professor of physics and astronomy.

O'Hara takes to the air on NASA's "Weightless Wonder," a C-9 jet used to train astronauts in reduced gravity.

We continue. Each year, KU pursues progress and breaks new ground. We discover solutions to complex problems. We lead in innovation. From a hill in Kansas, we change the world. We climb together, and we RISE.

We progress discover lead change RISE.



Strong Hall 1450 Jayhawk Blvd., Room 230 Lawrence, KS 66045



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