



CREATED CREATED IN GREATER FOCUS

THE MAGAZINE OF THE EXPECT GREATER CAMPAIGN | ISSUE 1 | FALL 2021

UCDAVIS

Sustainable agriculture *feeds a hungry planet*

ALSO INSIDE

- + Meet the alumnus on Pfizer's COVID vaccine team
- + Shaping the future of four popular drinks
- + High-tech equine health care
- + The arts' shining moment

 **Expect Greater**
From UC Davis. For the World.

First-generation. Sustainable. Comprehensive. Hispanic-serving. Level 1. Top-ranked. Interdisciplinary.

These are words we never tire of at UC Davis, and proof of the impactful work our community does to improve all aspects of life, all over the world. The momentum is palpable both on our Davis campus and at UC Davis Health, where faculty, staff and students advance incredible discoveries and innovations every day.



In these pages, we are thrilled to introduce you to UC Davis experts who are using their talents, drive and interdisciplinary expertise to build a better world. You'll meet a veterinary school alumnus who helped develop the Pfizer-BioNTech COVID-19 vaccine. You'll read about health care leaders developing life-saving technology and students preparing to launch their own careers

and forge their own paths to make a difference.

You'll also learn about researchers like Irwin Donis-González, who is working to feed a growing population while saving the planet.

Donis-González is a biological and agricultural engineer. By that, we mean a scientist, an inventor, a techie, a teacher and a collaborator. He aims to optimize the quality and safety of the foods we harvest. To do this, Donis-González invents new postharvest technology, builds it at our Biological and Agricultural Engineering machine shop, and then trains students how to use the machinery in the real world. Put it all together and he's something greater. He's an Aggie.

We all strive to live up to the words that embody UC Davis. And there's another word we never tire of here: gratitude.

Your gifts benefit our most important work, from educating tomorrow's leaders to addressing today's most pressing issues. Just one year into the public phase of our campaign, "Expect Greater: From UC Davis. For the World," you are proving that the world can indeed expect greater from us.

The future couldn't look brighter, thanks to our students, faculty, staff, parents, alumni and supporters. We are so grateful. Thank you, all.

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Chancellor

Shaun B. Keister
Vice Chancellor of Development and Alumni Relations
President, UC Davis Foundation

Darryl L. Goss '83
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Expect Greater
From UC Davis. For the World.

UC DAVIS

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Cover: Professor Ermias Kebreab adds seaweed to cow feed to cut methane emissions. See story, page 2. Photo by Gregory Urquiaga / UC Davis.

Opposite page, 1-r: Vice Chancellor of Development and Alumni Relations Shaun B. Keister, UC Davis Foundation Chair Darryl L. Goss '83 and Chancellor Gary S. May. Photo by Sam Sellers / UC Davis.

This page: UC Davis students pour a perfect cup of coffee, one of the beverages joining wine as a signature UC Davis specialty. See story, page 10.

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Sustainable agriculture feeds a hungry planet

BY CLÉMENTINE SICARD

Gail Taylor, distinguished professor and chair of the Department of Plant Sciences, examines plants in the indoor vertical farming facility with Ph.D. student Yufei Qian '18, M.S. '21.

HECTOR AMEZCUA / UC DAVIS

With climate change and food insecurity threatening a growing global population, sustainably producing and distributing safe, nutritious food has never been more important.

UC Davis' long history as an agricultural powerhouse positions the university to solve these challenges with innovations to benefit both California and the world.

Learn more from three faculty working at the forefront of agricultural research, finding novel ways to protect precious resources while advancing food production—from feeding seaweed to cows, to growing plants vertically and finding ingenious methods for processing crops.

CONTINUED ON NEXT PAGE...

A very green diet for cattle

Last March the team of Ermias Kebreab, associate dean of global engagement in the College of Agricultural and Environmental Sciences, announced a discovery that could change the future of livestock production: Adding just a small amount of seaweed to cow diets reduces their methane emission by as much as 82 percent.

“This is really a game changer,” said Kebreab, who is also a professor in the Department of Animal Science and director of the World Food Center. “There’s phenomenal potential to reduce greenhouse gas emissions on a scale that we never thought would be possible.”

Cattle are the top agricultural source of methane in the U.S.—50 percent of anthropogenic methane emissions are released by cows and other ruminant animals.

Because methane doesn’t stay in the atmosphere as long as other gases like carbon dioxide, reducing emissions now will have visible impact on the climate within the next decade.

“Our findings could help the cattle industry get to a climate neutral position much earlier than they are currently committed to,” Kebreab said.

Since 2018, he and graduate student Breanna Roque ’20, Ph.D. ’27 have been testing seaweed and other additives in beef and dairy cattle diets and measuring the methane emitted in their breath through an open-air contraption from which the animals feed.

They are the first in the world to test seaweed in cattle diets—a creative endeavor which, Kebreab noted, was helped made possible by the support of donors.

“Donor support gives us the freedom to think outside of the box,” said Kebreab, who currently holds the Sesnon Endowed Chair in Animal Science. “It really allows us to be much more flexible and take a risk that we might not be able to take otherwise.”

➤ **UC Davis ranks #1 in the nation and #2 in the world for agriculture by *U.S. News & World Report* and *QS World University Rankings 2021*.**

➤ **UC Davis ranks as a top 20 “Coolest School” in the nation for sustainability efforts by *Sierra Magazine 2021*.**

Kebreab’s research has generated interest from all over the world. He is collaborating with others in Spain and Australia and gave a TED Talk in Edinburgh in October on his research. He hopes that one day this breakthrough can be implemented on a larger scale for the benefit of the whole planet.

“Climate change is one of the biggest issues that we have to solve not just for us, but also for our children and grandchildren,” he said. “It’s our duty to find a solution and leave the planet better than when we found it.”

Growing plants vertically and indoors

In Plant Sciences, a 40-foot-long shipping container is home to one of the latest innovations on campus: an indoor vertical farming facility.

The facility, funded by the College of Agricultural and Environmental Sciences, features cutting-edge technology such as climate sensors and LED light strips and features rows of vertically hung panels filled with leafy greens like watercress and lettuce, and soon strawberries too.

This hydroponic system—the growing of plants without soil—has the potential to use 90 percent less water than traditional methods. Within the controlled environment, there is also significantly less need for pesticides and other chemicals.

“In the last five years or so there’s been increasing interest in indoor vertical growing systems. It’s driven by the requirement for more secure food across the world and the fact that many areas of the world aren’t viable for food production,” explained Gail Taylor, distinguished professor and chair of the Department of Plant Sciences. Taylor also holds the John B. Orr Endowed Chair in Environmental Plant Sciences.

“It’s also a great way to improve the nutritional value of the crops we grow, and they provide the potential to produce really high-quality food,” she added. “We’re trying to make the best varieties for indoor agriculture to help the nation have a healthier diet.”

CONTINUED ON NEXT PAGE...



KARIN HIGGINS / UC DAVIS



HECTOR AMEZCUA / UC DAVIS

left: Simple yet effective: Ermias Kebreab at the Dairy Barn feeds cows a groundbreaking feed containing seaweed additives that reduce methane in their digestive tracts.

above: Watercress, one of the crops grown in the vertical farming facility.

right: Gail Taylor at the site of shipping container housing the vertical farm.





left: Irwin Donis-González, who manages Latin American relations at the UC Davis Coffee Center, pours coffee beans into a unit that predicts their moisture content.

right: Donis-González with Ph.D. student Alice Mei-Wong Dien M.S. '20, who studies the drying and storage of agricultural produce. They are installing a probe into a convective desiccant dryer.

The indoor system isn't meant to compete with traditional agriculture methods, but it can help the areas where water shortage or urbanization make growing local foods difficult.

It also doubles as a teaching facility, providing students with a well-rounded, hands-on education in agriculture that includes technology, computer science and engineering skills. Faculty and students can even control the facility's functions remotely on a smartphone app.

"Our students are naturally drawn to this project and find it exciting to be controlling our new 'farm' on their phones," she said.

"Farming in the 21st century can be this high-tech endeavor and we need to train students in this multi-disciplinary environment," she explained. "It's really important that we can expand this facility so that we can train the next generation of farmers for the food industry."

The facility is partly funded by Taylor's endowed chair, awarded to her in spring 2021—and its impact has been significant.

"I feel very privileged to hold an endowed chair and it energizes me to do great things, particularly to improve the sustainability of food supply systems," she said. "The fund supports training and research in Environmental Plant Sciences, and it's a wonderful legacy for the future."

Caring for crops, reducing waste

Once crops have been grown and harvested, they must be properly stored, dried and processed before reaching everyday people. For Irwin Ronaldo Donis-González, research specialist in biological and agricultural engineering, finding sustainable methods for this process is a priority.

Donis-González, who is also the associate director of the Postharvest Technology Center, researches safe postharvest handling of crops like fruits, vegetables and tree nuts while finding ways to reduce food waste, assess and maintain their quality, and reduce energy use throughout the process.

"If we do not develop techniques to properly store and transport a product, everything we've done in the field—from labor to energy and resources—will be wasted. It's important

that we protect the great quality of what was grown," he explained.

Recently his team looked at how to efficiently dry almonds after they have been picked. Traditionally, almonds are shaken off trees and left to be dried and picked from orchard grounds, but this can sometimes lead to potential pathogen contamination and create environmental dust.

Donis-González's team created a stockpile of almonds on an A-frame structure and used a fan to properly dry them—an inexpensive, resourceful way to dehydrate the almonds outside of the orchard ground.

"Everything we do ties into the overarching concept of sustainability," he explained. "We focus on ecologically and economically sustainable solutions that cost less for farmers and utilize less resources."

"In certain instances, depending on where you are in the world, you can almost lose or waste up to 50 percent of

the products grown, so we want to reduce that whenever possible," he said.

Donis-González also noted the importance of students, who are often the backbone of the research happening across the university.

"I've learned so much from my students," he said. "They go on to become the next leaders in agriculture, and investing in our research and students is also an investment in our future."

Students, like faculty, come from all over the world to learn and contribute to the agricultural innovation at UC Davis.

"Being part of the faculty here is very humbling because we are surrounded by open-minded people who embrace that for us to move forward as a global population, we must have a multidisciplinary, multicultural mindset," Donis-González said. +

Using technology to redefine the new normal for aging

BY ASHLEY HAN

UC Davis works to make aging—and caring for aging family members or friends—healthier and more connected than ever. The Healthy Aging in a Digital World initiative develops innovative technologies to advance wellness, enhance independence and reduce the personal and societal challenges of aging.



With more than \$11 million in philanthropic funding, this UC Davis Big Idea supports research in the art and science of healthy aging.

“I am excited about discovering ways to age well,” said Heather M. Young, dean emerita of the Betty Irene Moore School of Nursing at UC Davis and Big Idea co-champion. “Our team of experts innovates with tools and technology that hold the promise of enabling individuals to stay in the communities in which they live—connected to their caregivers and their care providers—in an inobtrusive way that maintains their independence, predicts their challenges and avoids the risks associated with growing older.”

The Interactive Care (I-CARE) Platform

Many older adults are familiar and highly competent with technology. In fact, 73 percent of people 65 and older surf the internet and 53 percent use smartphones. By leveraging this connectivity to support older adults’ independence, more people can age in place.

“The Interactive Care Platform, or I-CARE, is a system designed to connect older adults with cognitive impairment to their family members who live apart from them. It supports them with important daily

activities,” said Dr. Alyssa Weakley, assistant professor in the Department of Neurology.

The goal for I-CARE is to create a user-friendly device that’s uniquely tailored to older adults and their family members to help assist with activities, manage medication regimens, reduce isolation and improve brain health.

“I-CARE captures backend data through machine learning techniques so, when subtle changes occur that may suggest cognitive or health decline, the caregiver is alerted to possible interventions,” Weakley said. “We are currently completing a pilot intervention with cognitively impaired individuals and remote caregivers to assess the usability and feasibility of this platform.”

Walking in the Living Domain (WILD)

Aging brings about changes in walking, balance and the risk for falls. UC Davis is working on solutions to reduce the consequences of fall injuries by measuring the subtle yet vital changes in walking patterns.

“Walking is such an important marker of physical health and function, people have often named it a sixth vital sign,” said Dr.Carolynn Patten, professor and director of the Biomechanics, Rehabilitation, and Integrative Neuroscience (BRaIN) Lab in the School of Medicine Department of Physical Medicine and Rehabilitation.

“By analyzing the variability and characteristics of gait parameters such as stride time, we can predict falls, detect cognitive decline and map certain parameters to specific forms of dementia or mild cognitive impairment. Our Walking in the Living Domain, or WILD, project offers an

innovative digital health solution and is working toward a novel predictive analytics tool for clinicians to use.”

WILD uses markerless motion capture technology to enable comprehensive 3D gait analysis outside of the traditional laboratory. The team sets up eight cameras in UC Davis Health facilities and community settings. Participation requires only a few minutes to capture a person’s walk; they have the data they need to determine next steps within 30 minutes.

“We hope to collaborate with machine learning experts to improve our data analytics methods and to compare our markerless system with commercially available wearable sensors,” Patten said.

Smart Home Platform for Aging Well

Nearly 90 million U.S. adults have voice-activated smart speakers at home. Yong Choi, assistant professor in the Department of Public Health Sciences—Health Informatics Division, and his team alter these popular smart speakers so their use extends beyond entertainment.

“The vision of the Smart Home Platform for Aging Well includes older adults living in this smart home environment where they can access their health information from digital virtual assistants to manage their health and wellness more easily,” Choi said.

“Fundamentally, we wanted to understand how older adults perceive and use the technology and identify the barriers of these smart speakers, so that we can inform our version of technology tools and improve upon what’s currently available.”

The smart speaker with AI health assistant is the conduit for all the data exchanges to help older adults stay in their homes longer by staying connected to their health care team. Choi and his team are nearly complete with a prototype and are optimistic about sharing this technology with the rest of the world. +



Associate Dean for Research Janice F. Bell, inaugural holder of the Western Health Advantage Endowed Professorship.

A powerful health care partnership

In September 2021, the Betty Irene Moore School of Nursing at UC Davis announced a gift from Western Health Advantage (WHA) to create the first endowed professorship at the nursing school. The inaugural holder of the Western Health Advantage Endowed Professorship is Associate Dean for Research Janice F. Bell, who’s nationally recognized for her distinguished scholarship in health and caregiving research.

“We are grateful to Western Health Advantage for their visionary partnership and our shared goals of improving the health of communities and advancing health equity for everyone,” said School of Nursing Dean Stephen Cavanagh.

The \$1 million endowed professorship establishes a five-year term and supports a mid-career or senior faculty member in the School of Nursing whose specialty advances health through nursing education, research, practice and leadership. Endowed gifts are invested so that their earnings can be spent, and they provide valuable income, year after year, creating a lasting impact.

“Our investment in the Betty Irene Moore School of Nursing can help grow nurse leaders. This endowed professorship will pay off in ways we can’t even yet imagine,” said WHA CEO Garry Maisel. WHA is a health plan in Northern California that currently serves more than 110,000 members in 10 counties.

Beverage experts shape the future of four popular drinks

BY ASHLEY HAN

What do you get when you mix coffee, beer, tea and wine?

A concoction of UC Davis expertise that's bursting with innovation

As a leader in agriculture, it's no surprise that UC Davis also excels in the science of beverage making. However, the future of these four worldwide beverage staples face several common challenges such as climate change, the COVID-19 pandemic and the need to diversify the field.

Despite these obstacles, UC Davis continues to make scientific advancements, collaborate with industry partners and prepare students to become leaders who create new drinks for the world to enjoy.

One-of-a-kind tea movement

The Global Tea Initiative for the Study of Tea Culture and Science (GTI) and its growing popularity have drawn students across the U.S. and Canada to UC Davis to study all aspects of tea—from its cultural history and the evolution of teapots to the scientific and health aspects of regular consumption. Katharine Burnett, art history professor and founding director of GTI, describes the initiative as a global, transdisciplinary teaching, research and outreach effort for tea and tea-related studies in the humanities, social sciences, sciences, and health/medicine.

"UC Davis, being so comprehensive, is the ideal place to study tea. Because of its research strengths, there's nothing like it in the world," Burnett said. "Not only do we have diverse experts and international partners, we have intellectually curious and engaged students who are working with our scholars to solve challenges like water conservation, ecological resource management and sustainability efforts that relate to tea."

With the goal of expanding the study of tea, GTI is offering its fifth annual First Year Seminar on Global Tea Culture and Science in 2022. Working with UC Davis Continuing and Professional Education, GTI will open its Professional Certificate Program to the public in 2022. Plans for a tea curriculum for UC Davis students are underway.

Burnett says the long-term goal is to grow from an initiative into an institute like the Robert Mondavi Institute for Wine and Food Science—one with full facilities, endowed professorships and student scholarships. She has seen the power of donor support in bringing the GTI to life and is excited to see how philanthropic partners will help make this vision a reality.

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Beer without borders

The beauty of beer is that it brings people together. In fact, the brewing industry is one of the few where competitors feel free to sit together and share ideas and possibilities. Glen Fox, associate professor in food science and technology and the Anheuser-Busch Endowed Professor of Malting and Brewing Sciences, says when breweries in America contact UC Davis, they trust that the university's expertise will meet their interests and needs.

UC Davis has contributed to this industry since the late 1950s, developing a pipeline of successful brewers and leaders through its Brewing Program.

"We've created a portal for breweries by sharing research, connections, equipment and our students who often start as interns and then advance into successful careers," Fox said. "Having support for our students and researchers is important because the contribution is directly applied in the real world."

UC Davis has one of the best pilot brewery facilities in the nation. The brewery program includes projects on better understanding of dry hopping during fermentation as well as waste management strategies.

Although the pandemic prevented many faculty and students from accessing these facilities, research continued thanks to local breweries who offered their sites for sensory trials. And according to Fox, students were able to successfully complete their educations virtually, many of whom are now employed in the brewing industry.

Pulling smoke from wine grapes

One major challenge vintners face is wildfires, especially in California. The smoke taints grapes, infusing them with an unwanted taste.

As the climate continues to change drastically, UC Davis is at the forefront of environmental and viticulture research. Andrew Waterhouse, professor in Viticulture and Enology and director of the Robert Mondavi Institute for Wine and Food Science, said UC Davis is the best place to solve challenges like smoke taint in grapes.

"The Department of Viticulture and Enology has always had the approach of being an innovator in the field," Waterhouse said. "We're investigating genes in grapes by using advanced technology, and we're using artificial intelligence to study grapes in the vineyard. Our researchers come from diverse backgrounds like Silicon Valley to bolster agricultural research."

Students are well prepared to enter the viticulture fields thanks to award-winning experts; however, those who want to become their own boss need more experience with culture and business. Donor-funded support for endowed chairs, research and student scholarships will help.

Beyond a morning drink

Coffee may just be a morning drink for most people but to UC Davis experts, coffee is a form of science education.

The UC Davis Coffee Center is the first multidisciplinary university research center to address the challenges and needs of the coffee industry through a holistic approach. The center was born out of the popular undergraduate elective course, The Design of Coffee, which was developed by chemical engineering professors Tonya Kuhl and Bill Ristenpart in 2013.

The class was designed to attract students to science with a popular topic like coffee, but the program has grown to include research into many areas such as sustainability and repurposing coffee cherries, agricultural outreach and extension, chemical and biological degradation during green bean storage, biological effects on consumption and more.

"One of the most exciting potentials for coffee research is to help small stakes farmers improve their sustainability all while increasing their economic benefit," Kuhl said. "We really hope to make sure that everyone benefits from improving coffee production."

The Coffee Center is geared to train the next generation of leaders and researchers to service the coffee industry, from mom-and-pop shops to huge coffee corporations. Donors joined the virtual site dedication event in June 2021 and fundraising efforts are ongoing to support the state-of-the-art center, slated to open in fall 2022. +

- The UC Davis Global Tea Initiative and Coffee Center are the only two programs of their kind in the nation.
- For more than 135 years, UC Davis has maintained active research and education programs in viticulture, enology and food science.
- The UC Davis Brewing Program is one of the oldest programs in the U.S. and the pilot brewery is one of the best-equipped teaching breweries in the world.
- The UC Davis winery, brewery and food-processing complex was the first LEED Platinum building on the UC Davis campus and only the third built by the University of California.



GREGORY URQUIAGA / UC DAVIS

GREGORY URQUIAGA / UC DAVIS

HECTOR AMEZCUA / UC DAVIS

JOE PROUDMAN / UC DAVIS

The arts' shining moment

BY CLÉMENTINE SICARD

The arts are prospering at UC Davis. Since 2016, the art scene on campus has grown monumentally with the opening of the Jan Shrem and Maria Manetti Shrem Museum of Art, the renovation of the C.N. Gorman Museum, reimagined arts education programs and more—all made possible by donor support.

Even through the pandemic, one of the hardest times in the history of museums across the world, donor and community support ensured that the tradition of arts on campus is not just here to stay, but becoming greater than ever.

Gifts to the Manetti Shrem Museum

In 2019 Jan Shrem and Maria Manetti Shrem put out a challenge to the community: If donors collectively gave \$3 million to support the museum's endowment, they would contribute another \$3 million to match.

Since then and throughout the pandemic a group of philanthropists rallied to the cause and contributed more than \$4.25 million—exceeding the challenge's goal by nearly 50 percent.

"In the time of our greatest need, the Manetti Shrem Museum Partners stepped up in extraordinary ways to ensure that the museum would be free for all forever, and that arts are alive at UC Davis not just now, but long into our future," said Rachel Teagle, founding director of the Manetti Shrem Museum. "I am so unbelievably grateful and truly proud to serve our community."

Along with other dedicated museum supporters, impactful gifts to the Manetti Shrem Museum inspired by the challenge include:

- **Jeff '79 and Kellie Hepper:** \$1 million to Hepper Family Exhibition Fund—The largest gift made to the museum by an alumnus, the Heppers' gift will help create public exhibitions and exhibition-related programming for all to enjoy at the Manetti Shrem Museum.
- **Janet and Clint Reilly:** \$1 million to the Janet and Clint Reilly Acquisition Fund—The San Francisco-based couple provided the museum's first fund dedicated to purchasing and acquiring new art, supporting the museum's Fine Arts Collection.

Support for the Gorman

Another museum that has seen generous donor support since the beginning of the Expect Greater campaign is the C.N. Gorman Museum, which has brought Native American and Indigenous art and artists to the UC Davis campus for more than 45 years, and broke ground on new renovations this past April.

Impactful contributions to the C.N. Gorman Museum have been made by Nancy and Bill Roe, Christel and Jürg Bieri, Selig and Gloria Kaplan, and Carol and Don Tallman. Their gifts, along with gifts made by other museum supporters, help the C.N. Gorman Museum in its dedication to the creative expressions of Native American artists and artists of diverse cultures and histories, and commitment to exhibiting works by living Indigenous artists.

Top-tier arts education

Support for the arts on campus is also essential to student education. With help from donors, UC Davis has solidified its place as a premier hub for artistic innovation and education.

In fall 2021, UC Davis launched the California Art Studio: Manetti Shrem Artist Residencies, thanks to a new gift from Jan Shrem and Maria Manetti Shrem. The initiative brings today's leading contemporary artists into UC Davis classrooms and is believed to be the most extensive artist residency program of its kind in the United States, helping garner the M.F.A. program top 15 in the nation for "Best Graduate Programs" (*U.S. News & World Report*). +



GREGORY URQUIAGA / UC DAVIS



left: Museumgoers enjoy exhibits at the Manetti Shrem Museum.

above: Kenojuak Ashevak (Inuit/Kinngait), Bird Trio, lithograph, 1994. Gift of Gloria and Selig Kaplan.

right: Rendering of the new entryway of the C.N. Gorman Museum.



HUNG PHAM PHOTOGRAPHY





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BEST in SHOW

Optimizing equine health with high-tech care

BY ASHLEY HAN

A PET scanner that was used to image the human brain has been modified to work on a horse's leg. Treatments for horses such as stem cells for joint disease have been applied to other species, including humans. These are just a few of the many innovations that will be located at the new Equine Performance and Rehabilitation Center (EPRC).

The School of Veterinary Medicine has been working to bring this facility to life as part of the Veterinary Medical Center campaign. Work there will transform equine services with state-of-the-art facilities such as a new arena and gait analysis capability for lameness evaluation.

"The idea of the Equine Performance Center is to have one place where all the high-end equipment and all the experts are under the same roof, working together," said Dr. Mathieu Spriet, the radiologist leading the equine PET development at UC Davis. "As our caseload has majorly

expanded, there's definitely a need for more space and updated equipment."

The new center will also provide a safe space for people to ride their horses so experts can take a close look at performance issues. Dr. Larry Galuppo, D.V.M., Diplomate AVCS and professor of the Equine Lameness and Surgery Service, said observing horses in motion with their rider is important to evaluate subtle performance issues, figure out preventative measures, as well as help make recommendations for rehabilitation programs and appropriate therapies.

"With the Equine Performance Center, we can actually move to the next level of specialized diagnostics and treatments," Galuppo said. "Together, we're ensuring a safer and stronger future for horses, people and eventually other species with performance related issues."

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Clockwise from upper-left: Veterinarian Larry Galuppo examines a horse receiving stem cell treatment.

Samantha Stewart '14 and her thoroughbred, King's Cobrina, jump on Grass Derby Field at the Equestrian Center.

Radiographs help pinpoint areas of injury in veterinary patients.

Associate professor Mathieu Spriet (center) and veterinary students monitor a horse being scanned with MILEPET, the standing PET scanner.

Treadmill studies provide important physiological data, such as the effects of drugs on equine athletes.



DON PRIESLER / UC DAVIS



DON PRIESLER / UC DAVIS

The unique One Health approach

The School of Veterinary Medicine doesn't just care for animals; experts collaborate with the medical school, industry and colleagues to follow the One Health approach, a comprehensive method of research and care. One Health was coined at UC Davis by the late Dr. Calvin Schwabe—who was known as the father of epidemiology—in his 1984 book, *Veterinary Medicine and Human Health*.

"We have a strong veterinary community on campus but what makes us even stronger is our connection with other colleges, in particular, bioengineering," Spriet said.

"Collaborating with other experts has brought the Vet Med School opportunities to work with outside companies like Brain Biosciences, a brain imaging device company."

Many veterinarians at UC Davis have translated their research on animals to humans such as Galuppo's work on equine orthopedics, which has been applied towards regenerative medicine and sports medicine over the last 25 years.

"Everything we're doing at the vet school will have direct translation to people with orthopedic issues and especially to human athletes," Galuppo said. "For example, the stem cell treatment we use for horses is now used in humans to treat joint disease."

The California Horse Racing Board recently reported a 50% decline in equine fatalities in California horse racing between 2019 and 2021. Decades-long efforts, many in partnership with the UC Davis School of Veterinary Medicine, contributed to this progress.

Dr. Susan Stover, director of the J.D. Wheat Veterinary Orthopedic Research Laboratory, has been working on musculoskeletal injuries in racehorses for more than 30 years and understands how injuries develop, the risk factors and how to prevent them in the future.

"The neat thing about California is that the veterinary school, the industry and regulatory agencies work well together, so that allows for research at UC Davis to be implemented directly to patient care," Stover said.

Focus on rehabilitation

Rehabilitation services will be a central feature of the EPRC, with the goal of keeping equine athletes at their healthiest. The center will offer care both to horses that have lost strength due to injury or surgery, and to those taking their athletic training to the next level.

A key piece of technology for identifying injuries and rehabilitating horses is the latest standing PET scanner, the MILEPET, which uses an innovative equine imaging technique requiring only standing sedation for horses undergoing evaluation.

"The PET scanner is absolutely a game changer," Stover said. "Its extreme sensitivity for, and pinpoint localization of, early bone changes in response to microscopic damage allows for early identification and treatment of affected horses, preventing catastrophic injuries and enabling rehabilitation and return to performance."

Other services for rehabilitation will include an underwater treadmill, vibration therapy and acupuncture.

In addition, the School of Veterinary Medicine plans to offer new residency opportunities to train specialists in sports medicine and rehabilitation, ensuring that the expertise developed will benefit equine health far and wide. Spriet noted that there is no place like UC Davis—both for horses and the people who care for them.

"We all work together, exchange ideas and collaborate to offer the best care for all species," Spriet said. +

- The School of Veterinary Medicine ranks #1 in the nation and #2 in the world by *U.S. News & World Report* and *QS World University Rankings 2021*.
- The school leads the nation with \$81 million in annual research funding that is applied to benefit animal, human and planetary health. Its hospital treats more than 50,000 patients each year.



The Equine Performance and Rehabilitation Center will feature a variety of world-class services such as gait analysis with videography, an underwater treadmill, a teaching pavilion and more.

right: The equine underwater treadmill provides a gentle and effective form of post-surgical rehabilitation that builds muscle.



CIRCLE Clinic donors bring trauma-informed comprehensive health services to Sacramento foster youth



Dr. Katy Carlsen and Dale Carlsen have partnered with UC Davis Health to transform a shared vision into reality: a comprehensive, trauma-informed program to support foster youth in all aspects of wellness, including mental health. The Carlsens' \$2.55 million gift provides start-up funds for the CIRCLE (Comprehensive Integration of Resilience into Child Life Experiences) Clinic as well as an endowment for sustained support.

"My hope for the clinic and patients is that these children will receive child-centered, trauma-informed care that will build bridges for them so that they can practice their own resilience as children in the system," Katy Carlsen '87 said.

The first of its kind in Northern California, the CIRCLE Clinic offers children in the foster care system access to a primary care medical home from UC Davis pediatricians, mental and behavioral health services, and other health-related care.

Katy Carlsen is a pediatrician, alumna of both UC Davis and the UC Davis School of Medicine resident program,

and volunteer clinical faculty member at UC Davis Health, where she now trains today's medical residents. Her husband, Dale Carlsen, is the founder and former CEO of The Sleep Train Mattress Center.

"Katy and I believe in helping others and in particular children in foster care, as these kids did nothing wrong, but simply had parents that for one reason or another could not care for them," Dale Carlsen said. "Katy has been working on this project for over 10 years and we are excited to be part of the consortium helping to finally expand these kids' health care through a more comprehensive health model with UC Davis."

The clinic is a collaboration between UC Davis and the Sacramento County Health Center, and partners with other UC Davis Health units like the MIND Institute (see story, opposite page) and the Child and Adolescent

left: Dr. Katy Carlsen (left) and Dale Carlsen.
right: Katy Carlsen and Dr. Albina Gogo consult at the CIRCLE clinic.

WAYNE TILCOCK / UC DAVIS HEALTH

UC DAVIS MEDICAL CENTER
U.S. News & World Report 2021-22 rankings:
#1 hospital in Sacramento
Top 10 in California
Top 50 in U.S. in nine adult specialty areas

SCHOOL OF MEDICINE
U.S. News & World Report 2022 rankings:
#4 for diversity
#9 in family medicine
U.S. top 50 in primary care and research

BETTY IRENE MOORE SCHOOL OF NURSING
U.S. News & World Report 2022 rankings:
#24 among best graduate schools for master's degree nursing programs

Abuse Resource and Evaluation (CAARE) Center.

"It takes just one supportive adult to cultivate resilience in a child. It's that simple," Katy Carlsen said. +



Redwood SEED scholars enjoy an Aggie football game in their first quarter as UC Davis students.

Lifting up life & MIND

Despite the challenges of the pandemic, UC Davis has continued to help families affected by neurodevelopmental challenges through telehealth and safe in-person visits. The MIND Institute uses innovative technologies that are affordable and accessible, and goes above and beyond to help families—through webinars, interviews and robust online resources to support families through stressful situations and more. Discover these inspiring stories at the MIND Institute and how UC Davis is leading the way in autism and other neurodevelopmental research.

Essential research

The RDM Positive Impact Foundation is funding a \$1.25 million research program at the UC Davis MIND Institute to study SYNGAP1, a rare genetic condition that causes seizures (epilepsy), intellectual disability, developmental delays, and is highly associated with autism. As leaders in autism research, UC Davis experts and this robust gift will empower people with autism and other neurological conditions to live rich and meaningful lives.

A wish to help others

Carlo Sandoval donated his Make-A-Wish gift to kids with autism when he was just 16. The Sacramento native hopes to be a role model by doing something kind for kids with autism. Thanks to Sandoval's kindness and support of wish sponsor Bristol-Myers Squibb, Inc., the MIND Institute purchased a mobile VECTA calming station valued at more than \$5,000. This sensory-friendly machine helps promote positive coping during difficult procedures like blood draws.



Transformative college experiences

A groundbreaking new college program serving students with intellectual disabilities at UC Davis is now open. This fall, 11 Redwood SEED (Supported Education to Elevate Diversity) Scholars have joined their fellow first-year students on campus as part of the inclusive, four-year program. The MIND Institute and the UC Davis Office of Diversity, Equity and Inclusion are jointly running the program, which is funded in part by a five-year, \$2.1 million grant from the U.S. Department of Education.



WAYNE TILCOCK / UC DAVIS HEALTH

Racing to control COVID-19

The pandemic threw humanity into our worst shared tragedy—and challenge—in living memory. As we struggled to treat, protect from, and ultimately end the spread of the virus, teams at UC Davis and UC Davis Health emerged as leaders, beacons of hope in a dark time. These milestones offer a view of how far we have come, and how much we have overcome, in two years.

● Pandemic milestone ● UC Davis milestone

DECEMBER 2019

- An outbreak of acute respiratory illness, linked to the novel coronavirus (COVID-19), emerges in China.

FEBRUARY 2020

- UC Davis Health announces it is treating the first U.S. COVID-19 case acquired by community spread. (FEB. 26)
- The first suspected U.S. COVID-19 death is reported near Seattle. (FEB. 29)

MARCH 2020

- The World Health Organization (WHO) declares a global COVID-19 pandemic. (MARCH 11)
- Chancellor Gary S. May suspends UC Davis campus operations. (MARCH 18)
- UC Davis Health announces two clinical drug studies for potential COVID-19 treatments. (MARCH 26)

APRIL 2020

- UC Davis Health is named to Governor Gavin Newsom's COVID-19 Testing Task Force. (APRIL 6)

JUNE 2020

- UC Davis returns to reduced operations. (JUNE 2)

AUGUST 2020

- UC Davis Health partners with Pfizer Inc. for its vaccine trial. (AUG. 12)
- The first six vaccine trial participants at UC Davis Health receive their shots. (AUG. 20)

SEPTEMBER 2020

- UC Davis and the city of Davis establish Healthy Davis Together, a philanthropically supported collaboration for COVID-19 testing, to protect the entire community from the virus. (SEPT. 18)

- Global deaths from COVID-19 reach 1 million. (SEPT. 28)

OCTOBER 2020

- The National Institutes of Health grant UC Davis \$3.7 million to test workers in the Central Valley, where COVID-19 cases have reached alarming levels. (OCT. 1)

DECEMBER 2020

- The FDA authorizes the Pfizer COVID-19 vaccine for emergency use after data shows 95% efficacy. (DEC. 11)
- UC Davis becomes among the nation's first health systems to receive an initial allotment of the Pfizer COVID-19 vaccine. (DEC. 15)
- The FDA approves the Moderna vaccine for emergency use. (DEC. 18)

JANUARY 2021

- UC Davis Health begins vaccinating its patients. First up: those age 75 and older with underlying conditions. (JAN. 12)

FEBRUARY 2021

- UC Davis Health administers its 50,000th vaccine dose. (FEB. 21)

MARCH 2021

- The CDC announces people who are fully vaccinated can start returning to normal daily activities. (MARCH 8)

MAY 2021

- UC Davis Health helps vaccinate children ages 12-15 with Pfizer vaccine. (MAY 10)

JULY 2021

- A more contagious strain of COVID-19, the Delta variant, becomes of concern as areas across the U.S. see a spike in cases, even among vaccinated Americans.
- Healthy Davis Together wins a national award for COVID response from the Association of Public and Land-grant Universities. (JULY 1)
- University of California's COVID-19 vaccination mandate for staff, faculty and students takes effect. (JULY 15)

SEPTEMBER 2021

- Fall instruction begins—with full in-person learning for the first time since March 2020—for UC Davis students, 97% of whom are vaccinated. (SEPT. 22)

OCTOBER 2021

- The UC Davis Genome Center processes its one millionth asymptomatic COVID-19 test as part of Healthy Davis Together. (OCT. 15)



KARIN HIGGINS / UC DAVIS

Vet Med alumnus a key player in Pfizer vaccine development

BY ASHLEY HAN

When he was a student at the School of Veterinary Medicine, Fred Angulo D.V.M. '83, M.P.V.M. '84 realized his passion for animal care had transformed into a desire to care for all species, including humans.

He never expected that he'd one day work on a life-changing vaccine that would hopefully end the worst pandemic of his lifetime.

Pfizer Inc. recruited Angulo as an epidemiologist after he retired from his 26-year career at the Centers for Disease Control and Prevention (CDC). He has been working for Pfizer for three years now, supporting the company as an epidemiologist for vaccine development—including the COVID-19 vaccine. Before the pandemic, Angulo was working on vaccines for *Clostridium difficile*

infections (*C. diff*) and Lyme disease, among other projects.

"I helped in forecasting where the next surge in COVID cases would occur and determining the best place to do clinical trials," said Angulo. "We focused all of our efforts and resources on developing the vaccine as quickly as possible because we had an important role to help solve this problem."

Angulo explained that a vaccine typically takes around eight years to develop; however, Pfizer invested millions of dollars independently to give scientists full control on the development and expedite the process.

Rather than wait for each step to be finalized and approved, everything was done in parallel—even at the risk of losing money. For example,



NATIONAL INSTITUTES OF HEALTH



GREGORY URQUIAGA / UC DAVIS

KARL MAASDAM

while the vaccine was being finalized, production facilities were already being built and Pfizer was figuring out distribution and transportation.

"We must stick to science; only through science can we beat this pandemic," Angulo said. "That has been our unofficial motto at Pfizer throughout this past year and I truly believe that we can overcome COVID-19 if we come together and trust that science will win."

Working in public health, giving back for public good

Angulo's interest in animals and science started at a young age. His mother was born and raised on a cattle ranch in Northern California,

"As veterinarians, we have a vital role to play in preparation for the next pandemic."

-FRED ANGULO D.V.M. '83, M.P.V.M. '84

where Angulo would work during the summers, and his father is a microbiologist. He knew he wanted to follow in their footsteps.

"When I started veterinary school, there were so many opportunities I couldn't predict where exactly I would end up," Angulo said. "But UC Davis gave me the tools and a strong foundation to build upon my interests and it opened many doors throughout my career." Today, Angulo gives back to UC Davis as a donor to the School of Veterinary Medicine.

Public health became one of Angulo's main interests in veterinary school after meeting the late Dr. Calvin Schwabe. Known as the father of veterinary epidemiology, Schwabe helped strengthen UC Davis' commitment to One Health by ensuring that future veterinarians integrate human, animal and ecosystem protection into their professional work.

"After taking several of Dr. Schwabe's classes, I was intrigued by his work, connecting human medicine and veterinary medicine, and decided to go into the public health field," Angulo said.

Schwabe was instrumental in establishing an additional program at the veterinary school that offered a degree called Master of Preventive Veterinary Medicine. Angulo took the opportunity to earn his master's along with his veterinary degree at UC Davis simultaneously.

Angulo said working on the mastitis control program helped him learn more about disease control, microbiology and large animal medicine.

"Working with the mastitis group during the weekends was a great

hands-on experience and helped pay for part of my education," Angulo said. "It prepared me for the Army where I cared for small animals and managed public health activities at the bases in Europe."

A veterinarian's role during outbreaks

Angulo spent six years in the Army after graduating. He later earned a Ph.D. in public health at UCLA and spent most of his career at the CDC, where he worked on several national and international outbreaks.

"I initially joined the CDC on a two-year fellowship called Epidemic Intelligence Service; we worked on disease outbreaks around the world and tried to find ways to prevent future outbreaks," Angulo said.

"I then worked in the foodborne and diarrheal diseases branch on national surveillance of infections caused by *Salmonella*, *E. coli* and waterborne diseases, which helped the U.S. Department of Agriculture monitor the impact of new approaches to inspecting food in the U.S."

Major outbreaks Angulo worked on include the 2010 cholera outbreak in Haiti and the 2014 Ebola outbreak in West Africa. Angulo said disease experts have been planning for every scenario to prepare for the next major outbreak.

"There's a scientific roadmap to respond to these kinds of disease outbreaks and there are things we can do now to protect ourselves," Angulo said. "As veterinarians, we have a vital role to play in preparation for the next pandemic." +



From students to professionals

Three stories of Aggie success

Jacqueline Rajerison '21 (left) and Maya Schulz '22

ASHLEY HAN / UC DAVIS

UC Davis:

- #1 for diversity, inclusiveness and internationalization**
QS USA University Rankings 2021
- #2 affordable elite university**
Washington Monthly 2021
- #4 best public university overall**
Forbes 2021

BY CLÉMENTINE SICARD

Aggie Launch is a UC Davis Big Idea to help students soar. With this donor-supported initiative, the university is equipping all Aggies with the tools to forge a successful path after graduation—whether by landing a first job or continuing on to graduate school.

“At UC Davis we are dedicated to helping all of our students launch into careers that they find meaningful and that take full advantage of the world-class education they received,” said Marcie Kirk Holland, co-champion of Aggie Launch and director of the Internship and Career Center.

With \$10 million in donor support and growing, this Big Idea will build a comprehensive career-preparation program for all undergraduates, integrating existing successful ventures such as Aggie EVO in Athletics, AvenueE in the College of Engineering, and BioLaunch in the College of Biological Sciences.

The result? One robust network of student support providing three key opportunities: experiential learning, one-on-one mentorship, and pre-graduation planning for their next steps.

“We have convincing evidence that four years of preparation dramatically improves a student’s chances of launching, and also the likelihood that their academic path and preparation are a good match for what they want to do in life,” said Michael Lorenzen, executive director of Aggie EVO.

From the Arboretum to the UC Davis track field, and even all the way to Bodega Bay, students are bringing their futures to life with the help of Aggie Launch.

CONTINUED ON NEXT PAGE...

Donors make new Engineering Student Design Center a reality

Alumna and information technology executive Diane Bryant '85 gave \$6.5 million to the College of Engineering to name the Engineering Student Design Center in 2021. Additionally, John '69 and Mindy Baum gave an early gift of \$5 million to the entirely donor-funded project.

“My hope is the Engineering Student Design Center provides a visual reminder that everyone can succeed in the field of technology,” Bryant said. “I hope my gift helps to expand the population of students interested in exploring the possibilities of STEM.” She added that UC Davis’ welcoming environment helped her thrive when she was an incoming transfer student.

“The fact that UC Davis explicitly invests in recruiting and developing students from all backgrounds is a statement of their true belief in the value of a diverse population,” Bryant said.

The Diane Bryant Engineering Student Design center—due to open in fall 2022—will offer hands-on educational experiences and encourage students, especially women and those from underrepresented groups, to envision how they will change the world.

“It’s really important to have that hands-on learning experience,” said John Baum. “It is a great tool to help students retain the knowledge they learn in the classroom.”

John Baum learned the value of collaborative teamwork at the College of Engineering and as a member of the UC Davis Student Flying Club located at University Airport. He turned his love of aviation into a career, honing his skills and eventually flying commercially for United Airlines.

It was at United where he met his wife, Mindy, a flight attendant at the time. She was excited to provide donor support to her husband’s alma mater, of which he speaks glowingly.

“It really comes down to finding an interest in something you are passionate about, assessing where there is a need and what the benefit would be,” Mindy Baum said.



FRED GREAVES



REETA ASMAI / UC DAVIS

“It makes your internship experience stronger when you have someone encouraging you who sees your potential.”

- ELIANA BONO '21



MUAMER CELIK / UC DAVIS

Learning in the field

At the Bodega Marine Laboratory, marine and coastal science major Jacqueline Rajerison '21 spent this summer fully immersed in her own research project thanks to a donor-funded fellowship.

Rajerison and her fellow students taking BIS 124, Coastal Marine Research, had the opportunity to study with Professor Eric Sanford, live onsite, and work in the lab's state-of-the-art facilities.

“Being physically out here in the lab, manipulating my own experiment and being knee-deep in tide pools has allowed me to really see myself in a career in marine biology that I didn't think I would be able to do in the past,” Rajerison said.

The hands-on approach was key to Rajerison's experience, and a central tenet of Aggie Launch: “Experiential learning is a critical way for students to develop professional skills, to gain access to a network and apply their coursework,” explained Kirk Holland.

A helping hand (or two)

As a sophomore, Eliana Bono '21 joined Learning by Leading at the Arboretum as an intern. There, she applied her studies as an environmental policy analysis and planning major in a professional setting.

Bono wrote the program newsletter; designed and led educational activities for public events like Picnic Day; and impressed the staff so much she landed a job as a paid student employee.

Throughout, she benefited from the guidance of two staff mentors: Melissa Cruz Hernandez, outreach and leadership program manager and Maya Makker, museum education and interpretive manager.

“Mentorship is an important aspect of the Learning by Leading program because it gives us the ability to help students grow within the program and help them apply their classroom knowledge to real-world experiences,” said Cruz Hernandez.

For Bono, having mentors who trust her was a great source of motivation.

“It makes your internship experience stronger when you have someone encouraging you who sees your potential,” Bono said.



MUAMER CELIK / UC DAVIS

Post-grad planning

Track and field team member Ryman Crone '22 has a busy schedule as a student-athlete, but he's made the time to start his job search early thanks to Aggie EVO, the Aggie Launch program in UC Davis Athletics.

“Aggie EVO helped me form a really strong resume that I can send to potential internships,” said Crone, who is majoring in neurobiology, physiology and behavior.

Crone has enjoyed opportunities to network with professionals and explore various health-sector careers. He now plans to take the MCAT after graduation, then serve in the Peace Corps and, upon his return, apply for medical school.

“Career preparation is important for student-athletes like myself because much of our identity is rooted in our sport,” Crone said. “It's important post-graduation to find something else that we can devote our lives to.”

A success plan for all students

Building on the success of current programs, Aggie Launch is scaling up professional development opportunities to the entire university so that all students can benefit like Rajerison, Bono and Crone.

“Helping students launch their careers has never been more important, and it's not just for when they graduate, it's about their entire experience while they're in school,” said Kirk Holland. +

Ryman Crone '22



Alumni couple establish UC Davis' first endowed chair in African American Studies

This year, Lois '85 and Darryl '83 Goss created the first endowed chair in the Department of African American and African Studies at UC Davis with a \$1.5 million gift—plus \$500,000 from the UC Presidential Match for Endowed Chairs—to provide sustained funding for teaching, research and outreach about the history and culture of communities of African descent around the world.



“We specifically created this presidential chair due to the current climate around social justice—we want to bring diversity, equity and inclusion to the forefront of everyone's mind,” Darryl Goss said. “We need to provide appropriate support toward educational opportunities to generate more interaction and understanding of underrepresented people's histories.”

As two of UC Davis' most involved alumni, the Gosses have long been dedicated to the university's mission to make the world a better place. Lois Goss serves on the College of Letters and Science Dean's Advisory Council, the Women and Philanthropy Advisory Council and the Davis Chancellor's Club Cabinet. Darryl Goss is the UC Davis Foundation Board chair and also serves on the Athletics Board.

“Through this gift, we want to dispel those fears and untruths among anyone who feels like they don't belong, especially at UC Davis,” Lois Goss said. “Getting into UC Davis is no small feat and the fact that you are here says a lot about who you are and where you came from.”

Early gifts lead the way

While the public launch of UC Davis's second comprehensive campaign was celebrated virtually in October 2020, a number of visionary donors made early major gifts to help build momentum. Their stories illustrate the breadth and depth of the campaign's goal to advance health care, sustainability, scholarship and innovation across the university.

Gordon and Betty Moore Foundation gift supports nurse leaders and innovators

The Gordon and Betty Moore Foundation gave a \$37.5 million grant to launch the Betty Irene Moore Fellowships for Nurse Leaders and Innovators at the Betty Irene Moore School of Nursing at UC Davis in 2019. This new fellowship program recognizes early-career nursing scholars and innovators with a high potential to accelerate leadership

in nursing-science research, practice, education, policy and entrepreneurship.

"Nursing has become one of the most trusted professions and supporting leadership and innovation in nursing is a sound investment in the future," said Harvey V. Fineberg, president of the Gordon and Betty Moore Foundation. "This fellowship program honors Betty Irene Moore's commitment to nurses as

leaders and change agents and we believe it will improve the quality of patient care for everyone."

UC Davis and the foundation have partnered in a shared vision to transform health care since the School of Nursing was founded in 2009 by the foundation's commitment of \$100 million. The school has launched five graduate-degree programs, graduated more than 500 alumni, and is ranked among the top 50 nursing schools in the country according to *U.S. News & World Report*.



GREGORY URQUIAGA / UC DAVIS

Alumni gift helps ensure future of innovation and entrepreneurship education at UC Davis

Michael C. '76 and Renée Z. Child '76 made a \$5.2 million commitment to the UC Davis Graduate School of Management and College of Engineering in support of entrepreneurship and innovation programs in early 2020.

"Renee and I are humbled by watching how the university has grown in prestige and impact since we graduated," said Michael Child. "We've seen the impact of our previous contributions and are honored to be part of the important work of helping faculty and students translate their knowledge and skills into ventures that improve society and add value to the economy."

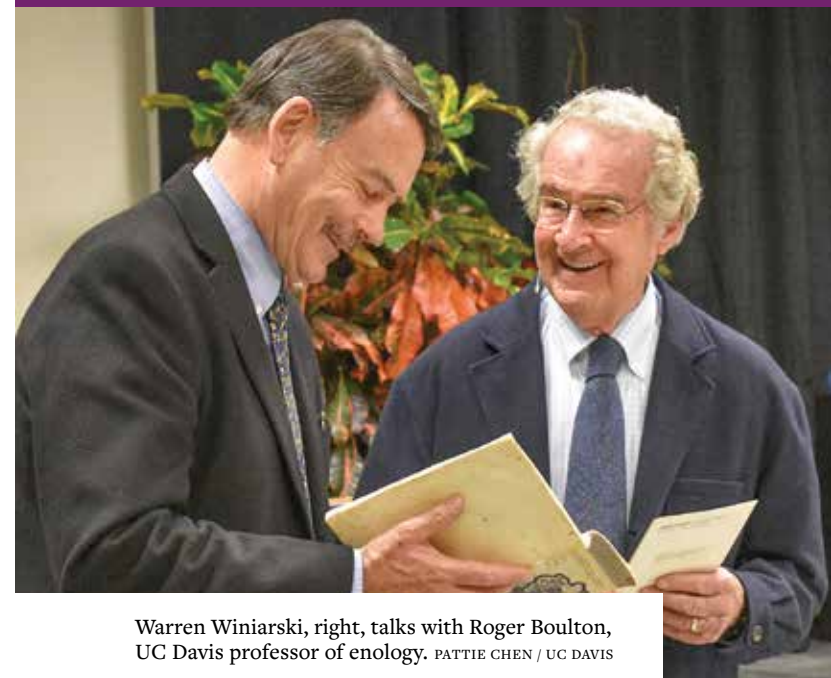
A majority of the commitment is intended to enhance the endowment of the Mike and Renée Child Institute for Innovation and Entrepreneurship at the business school, and a portion of the commitment is intended to support the expansion of innovation and entrepreneurship education, including funding to develop a series of case studies of UC Davis alumni changing the world with new ideas, new solutions and new ways of doing business.

The commitment builds on a \$5 million gift from the Childs in 2011 for an endowment that launched the institute, broadening the programming and reach of the UC Davis Center for Entrepreneurship founded by Professor Andrew Hargadon in 2006.

World-renowned vintner gives to the UC Davis Library

Warren Winiarski, grape grower, winemaker, land preservationist and philanthropist, committed \$3.3 million to build the most comprehensive collection of wine writers' work in the world at the library at UC Davis in 2018. The Winiarski Family Foundation's gift will preserve and increase access to the library's collection of work from some of the world's most prominent wine writers including Hugh Johnson and Jancis Robinson.

"My hope for this gift is that it will create a powerful resource for people who want to see how writers helped develop the wine industry itself and how they influenced the aesthetics of wine," said Winiarski, a Napa Valley resident. "Wine writers didn't write just about the regions or types of wine. They gave wine-makers the tools they needed to make wines better."



Warren Winiarski, right, talks with Roger Boulton, UC Davis professor of enology. PATTIE CHEN / UC DAVIS

Dedicated to preserving the heritage of wine and its international cultural importance, Winiarski has supported the UC Davis Library for many years. He took courses from legendary UC Davis viticulture and enology professor Maynard Amerine and said he wants to give back because of the university's strong international reputation in viticulture and enology and the library's innovative approach to archiving and digitizing its collections.

"I wanted to be part of that endeavor—to help make the library at the University of California, Davis, the preeminent library for this type of research and materials," he said.



KEVIN ULRICH / UC DAVIS

Record generosity for UC Davis vision science

Ernest E. Tschannen gave \$38.5 million in 2016 to support the UC Davis Eye Center and the Center for Vision Science. These gifts made Tschannen the largest individual donor to UC Davis at the time of the donation and support UC Davis' mission to be the world's transformational leader in collaborative vision research and in developing cures for blinding eye diseases from cornea to cortex.

"I have realized great success in the United States, and so my primary goal in life now is to give back to the country that gave so much to me," said Tschannen, an engineer from Switzerland who moved to Minneapolis in the 1950s and now lives in Sacramento County. "I like to help whenever I can. I'm so glad I am able to do it."

Tschannen, a grateful patient of UC Davis Health, designated \$18.5 million of his overall gift to name the UC Davis Eye Center, which is one of the region's most sought-after eye clinics, serving more than 55,000 patients each year with advanced specialty care.

"Even though I don't own the building, this has become a top priority in my portfolio," Tschannen said. "And this investment is just as important to me as my other real estate ventures because it will help advance glaucoma research, a disease that has afflicted me personally, and support two communities—UC Davis and Sacramento—which have contributed so much to my health and happiness."

Under construction

New buildings are going up on the UC Davis and UC Davis Health campuses, all innovative spaces that are powered by philanthropy and ambitious plans for the future.



1

C.N. Gorman Museum

Dedicated to the creative expressions of Native American artists and artists of diverse cultural and histories, the museum was founded in 1973 by the Department of Native American Studies in honor of artist and professor Carl Nelson Gorman.



2

Diane Bryant Engineering Student Design Center

The center will transform how students learn design and turn their ideas into a reality. The space will include areas for instruction, student-client collaboration, rapid prototyping, machining, welding and more.



3

Coffee Center

Due to open in 2022, the Coffee Center's renovated building is the world's first academic research and teaching facility entirely dedicated to coffee, where researchers address the challenges and needs of the coffee industry through a holistic, interdisciplinary approach.



4

Elizabeth Mary Wolf Environmental Learning Center

This center will enrich the west end of the Arboretum as a dynamic hub for people and programs. It will feature a spacious multi-purpose room adjoining the Arboretum Teaching Nursery courtyard.



5

Ernest E. Tschannen Eye Institute

When it opens in 2022, the institute will be home to talented researchers working on developing cures for blinding eye diseases, physicians delivering excellence in patient-centered care and educators training the physician leaders of tomorrow.



6

Edwards Family Athletics Center

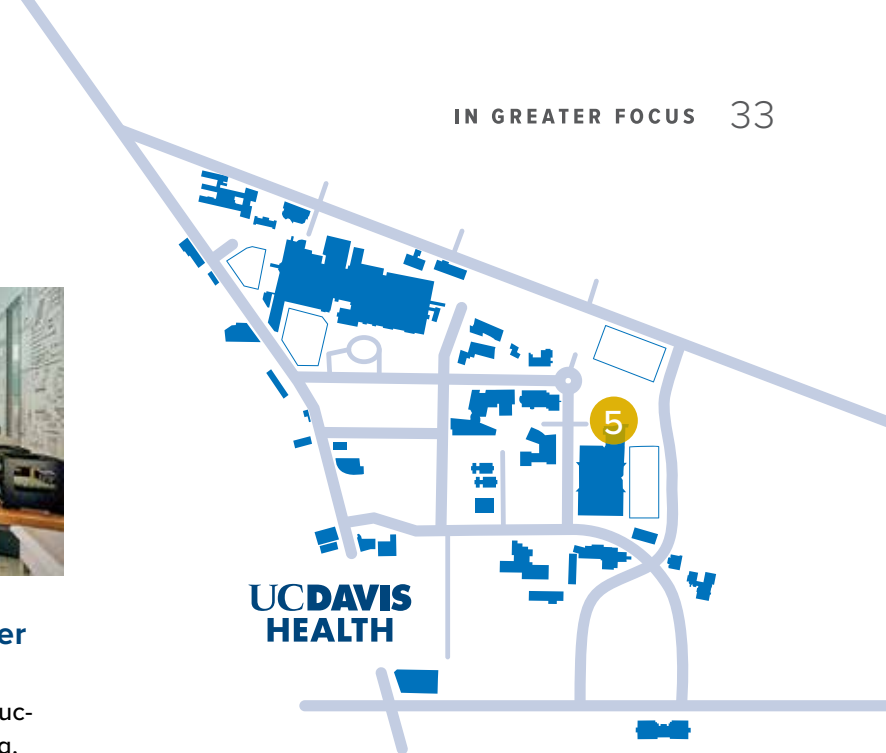
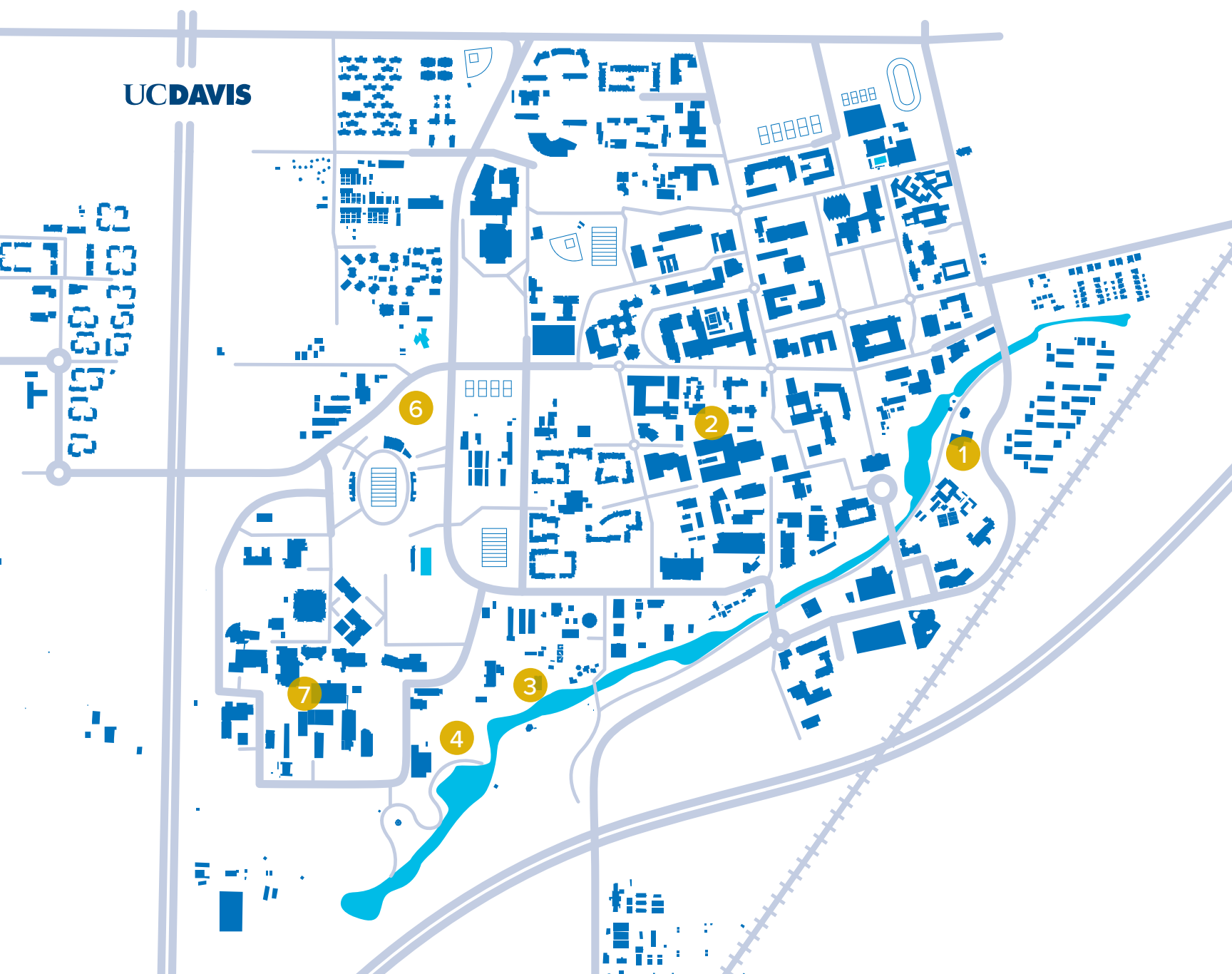
The new hub for Intercollegiate Athletics will support the health and well-being of students and the regional community, UC Davis' world-class athletics programs, and an expanded partnership with the UC Davis Health campus in Sacramento.



7

Veterinary Medical Center

Designed to promote clinical innovation, transformational research, discovery and compassionate healing, the new center will offer each animal and client attentive and personalized care at a world-leading biomedical research hub.



Voices for good

The “why” and “how” of giving are different for everyone. UC Davis donors share what makes their support so personal.



“As a first-generation Asian American, I like to support incoming first-generation, low-income first-year students and provide them with the guidance, skills, and resources to succeed. This is why my wife and I established an Endowed STEP Award Fund to support students participating in the Special Transitional Enrichment Program at UC Davis. The collective generosity of Aggie parents can make a huge difference in our students’ lives.”

DARRICK LAM '87

Chair, Family Fellows
UC Davis Foundation Trustee



“I have always been inspired by UC Davis’ commitment to using a multidisciplinary approach to finding solutions for solving the complex challenges of the world, especially in the areas of health care and cancer research. As an alumna, UC Davis has a special place in my heart and I feel that supporting its mission and giving back my time to campus is the right thing for me to do.”

DEBORAH NEFF '76

Chair, Global Campaign Leadership Council
Chair, College of Biological Sciences Campaign Leadership Council
UC Davis Foundation Executive Trustee



“There are so many amazing programs to support at UC Davis Health as part of the Expect Greater campaign. I’m proud to support the Gratitude Heals campaign and The CARE Project at the UC Davis Medical Center because these important programs enhance patient care and support our employees while they demonstrate extraordinary love, compassion, courage and integrity in every situation.”

TOBY MARSH, R.N., M.S.A., M.S.N.

Chief Nursing and Patient Care Services Officer, UC Davis Medical Center



“I started a scholarship for veterans attending the School of Medicine because they have already demonstrated their commitment to serve us by their service in uniform. We can make a down payment on that debt by supporting them in their educational goals. It is the least we can do after what they have done for us.”

SANDRA REED, CAPT., MC, U.S. NAVY (RET.), M.D. '85

School of Medicine Alumni Association Board Director
UC Davis Foundation Trustee



“I owe a great deal of success to my education at UC Davis, and giving back to help students at my alma mater is one way of showing my gratitude. Students need all the financial help we can give them to get them through their education so scholarships are the best investment for my money because I feel I get back ten-fold what I give.”

SANDI REDENBACH '72, CRED '73

Chair, School of Education Alumni Council
Member, School of Education Dean’s Board of Advisors
Vice President, Friends of the Mondavi



“Through my involvement in Aggies Helping Aggies, I have learned a lot about the importance of philanthropy in providing valuable resources and scholarships for students. I am very glad that I was able to help contribute towards initiatives that will help ensure that students have the resources they need to thrive academically and personally, now and in the future.”

JEFFREY LEE '22

Sociology-Organizational Studies; Community and Regional Development
Development Committee Chair, Aggies Helping Aggies



“I believe in amplifying the influence and impact of women and their roles of leadership. By combining our time, energy and financial means, we can help UC Davis achieve amazing things in terms of research, student and faculty success, and advancing innovative solutions to help solve challenges around the world.”

MARGARET LAPIZ '89

Member, UC Davis Women & Philanthropy Advisory Committee
UC Davis Foundation Trustee



“I am continually amazed by the positive contributions that UC Davis makes to the world each day. My Aggie Pride grows as I learn about every facet of life that UC Davis touches, which inspires me to volunteer my time to UC Davis and stay connected to the university and its great alums, all to make the world a better place for my kids.”

SCOTT JUDSON '09, J.D. '12

President-Elect, Cal Aggie Alumni Association



“At any point in our lives, we or someone we love may need treatment that only UC Davis Health can provide, and it’s important to contribute to the organization’s success. My contribution, although modest, supports the UC Davis community in our efforts toward a healthier world.”

DANIEL MARENCO

IT Manager, Systems Integration, UC Davis Health

Paths to positive change

From loyal supporters who give time and gifts year upon year, to those who leave bequests in their estates, to corporations and foundations that partner with the university, there are many creative ways donors choose to benefit UC Davis and help build a better world.

▲ Foundational support for law students

The William and Inez Mabie Family Foundation has pledged \$1 million to the School of Law for an endowed scholarship in memory of Ronald Hayes Malone, the foundation's longtime president and a one-time Watergate prosecutor. The scholarship will go to qualified students with demonstrated financial need—especially those who would not be able to attend law school without significant private support.

The power of endowments

Endowment gifts deepen UC Davis' impact and empower the university to compete at the highest level for the world's top faculty and students. They provide a stable, permanent source of support, allowing the university to plan confidently for the future and build a better world—today, and tomorrow.

Each year, a portion of the income from an endowed fund is spent to support the donor's stated purpose, leaving the principal untouched. Another part of the income is reinvested in the principal, growing its value into the future.

The market value of UC Davis' endowment has tripled over the past decade—reaching \$2.2 billion today—thanks to newly created endowed funds, additions to current endowments and strong investment returns.

> Distinguished friends

Bill and Nancy Roe are longtime friends of UC Davis and have shown their dedication through campus involvement. The couple donated the



dramatic grand canopy that welcomes visitors to the Jan Shrem and Maria Manetti Shrem Museum of Art, just one of their many philanthropic gifts across the university, notably to Intercollegiate Athletics and the arts (see story, page 14). Nancy Roe is a former UC Davis Foundation Board trustee and currently serves on boards of the

College of Letters and Science, Mondavi Center for the Performing Arts and Manetti Shrem Museum of Art.

> Lifelong connections

Gerry and Carol Parker stayed connected with UC Davis long after their daughter, Christina Brusca '99 M.B.A. '06, graduated. They were fascinated by the work at the UC Davis Tahoe Environmental Research Center and quickly became patrons of the facility.



Additionally, they support the Jan Shrem and Maria Manetti Shrem Museum of Art, where Carol Parker is co-chair of the Advisory Board. Gerry Parker serves on the Tahoe Environmental Research Center Advisory Board, and both have given their time by serving on the UC Davis Foundation Board.

> A quarter-century of commitment



Since graduating from UC Davis, Michael Hurlston '88 M.B.A. '90 M.S. '91 continues to be involved with the university both philanthropically and by volunteering with the two colleges where he spent his time. He is currently a member of the Graduate School of Management's Dean's Advisory Council and a member of the College of Engineering's Dean's Executive Committee. Hurlston and his wife, Joelle Hurlston '89, also established a presidential chair that has been rotating between the Graduate School of Management, College of Engineering, and the College of Agricultural and Environmental Sciences since 2017, among many other gifts across the university.

> Planning ahead for orthopaedic students



Acts of service have always been a part of life for Aaron Cook '82. The retired orthopaedic surgeon did not hesitate to make his first gift while still a surgical resident at

UC Davis. Years later, Aaron established a charitable remainder unitrust (CRUT) to support residents in the School of Medicine's Department of Orthopaedic Surgery, undergraduate students in need of financial aid as well as the Nature Conservatory.

A charitable remainder unitrust provides the donor or other named individuals income each year for life or a period not exceeding 20 years from assets given to the trust created. After, the remainder of the trust is given to the charitable beneficiaries.

KARIN HIGGINS / UC DAVIS

GREGORY URQUIAGA / UC DAVIS

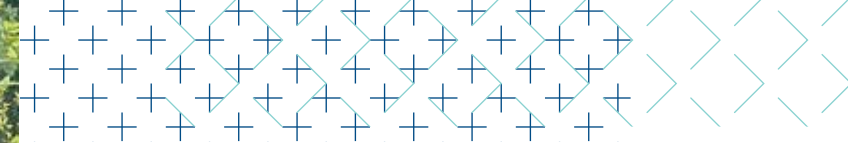
GREGORY URQUIAGA / UC DAVIS

Crowdfund UC Davis

The Crowdfund UC Davis campaigns in October 2020 and February 2021 brought in a combined \$180,697 from 1,954 gifts for 40 different campus projects.

One project that experienced great success was Cal Aggie Camp, a summer camp for children in foster care, which exceeded its fundraising goal by 21 percent. Dollars raised by the group helped them pivot to a virtual “camp” that allowed foster children to have the Cal Aggie Camp experience at home.

“Involving as many people as possible in our campaign was crucial. Finding ways for every person to contribute to our campaign was the key to our success,” said Rachael Helfrich, whose team spearheaded Cal Aggie Camp’s crowdfunding campaign.



Give Day

Each year in April, UC Davis’ Give Day sets records, and this year—its fifth—was no different. There were 237 challenge gifts (donations that “unlock” with a set number of gifts of any size), which drew many people to donate and extend the impact of their gifts. Give Day exceeded its previous fundraising record by nearly a million dollars, with a total of \$3,467,783 from 5,663 gifts.

Dollars raised benefited areas all over the UC Davis and UC Davis Health campuses. More than \$40,000 was donated to emergency funds. Remaining dollars supported other campus initiatives such as the expansion of COVID-19 testing at UC Davis Health, climate change research, the Transformative Justice in Education Center and more.

“Donors see the positive impact UC Davis has on our community and the wider world,” said Shaun Keister, vice chancellor of Development and Alumni Relations, the division responsible for Give Day. “They know that setting up a challenge or making a gift on Give Day allows them to have an even greater impact.”



KARIN HIGGINS / UC DAVIS

Many gifts, big impact

BY CHELSEA CLOUSER

Despite the past year’s challenges, grassroots fundraising campaigns like Crowdfund UC Davis, Employee Giving Month, Aggies Helping Aggies and Give Day experienced record-breaking success in 2021.

Each event emphasizes the collective impact small gifts can have, a message that motivates people to support UC Davis in new ways.



JENNI DINGELDEIN / UC DAVIS

Aggies Helping Aggies

The UC Davis Student Foundation, Aggies Helping Aggies (AHA), is another campus program that emphasizes small but impactful giving—this time, among students.

In addition to educating their peers about the power of philanthropy, AHA fundraises for student-focused initiatives such as a group study room for the Library; the Aggie Compass Basic Needs Center; and Student Emergency Relief Aid (SERA), an assistance program for students in need due to sudden unemployment, medical emergencies and other challenges.

AHA’s educational and fundraising campaigns paid off in a big way this year. The number of student donors increased by more than 300 percent, and the total dollars raised went up by more than 46 percent. Many of the funds raised went to SERA, which awarded a total of \$18,689 in grants to 18 students in need.



KARIN HIGGINS / UC DAVIS

Employee Giving Month

After a hiatus in 2020, Employee Giving Month returned in April 2021 and broke several of its previous records.

More than 2,200 employees participated, donating 3,601 gifts amounting to \$257,765—a significant increase from 1,829 participants and 2,811 gifts in 2019.

This year’s success is in part due to the creation of the Staff Emergency Fund, which provides cash assistance to help employees pay for housing, medical emergencies and other critical needs. Since its establishment last fall, the fund has provided more than \$30,000 in support to 40 employees.

“Supporting the Staff Emergency Fund makes me feel human,” said Jennifer Sang, executive assistant dean of the College of Biological Sciences. “It’s good to know that gifts of any amount are going toward a collective effort, and that every little bit makes a big impact.”



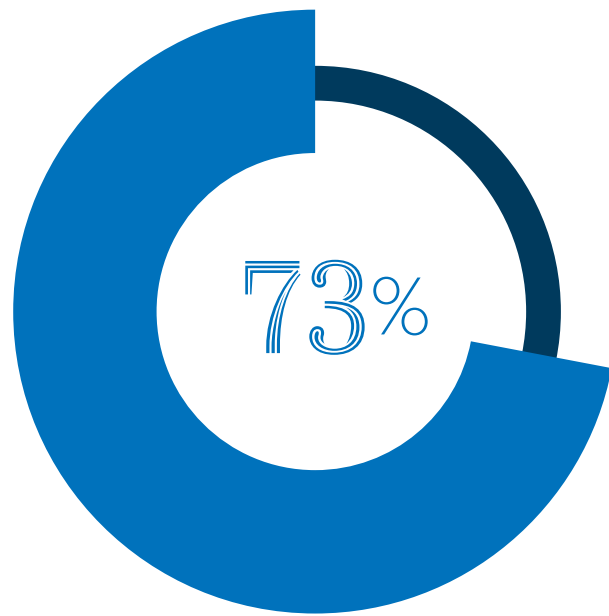
Expect Greater Campaign Progress

AS OF OCTOBER 15, 2021

TOTAL DOLLARS RAISED:

\$1,452,451,051

PROGRESS TO \$2 BILLION GOAL:



TOTAL DONORS:

104,767

NUMBER OF DONORS WHOSE FIRST GIFT TO UC DAVIS WAS MADE DURING THE EXPECT GREATER CAMPAIGN:

56,432

TOTAL NUMBER OF GIFTS:

293,753

AREAS SUPPORTED BY CAMPAIGN GIFTS:

- A** Student support _____ \$213m
- B** Research _____ \$536m
- C** Capital projects _____ \$163m
- D** Department and faculty support _____ \$279m
- E** Where the need is greatest _____ \$10m
- F** Other purposes _____ \$250m
The university environment, to benefit students, faculty, staff and community



vision
 success
 artistry
 character
 discovery
 leadership

expect

growth
 sustainability
 innovation
 passion
 compassion
 greater.

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Maya Schulz '22 (left) and Jacqueline Rajerison '21 study predatory snail species at the Bodega Marine Laboratory in summer 2021. See story, page 26.

ASHLEY HAN / UC DAVIS

Expect Greater
From UC Davis. For the World.

Greater together

Partner with us to help advance UC Davis' excellence in teaching, research and public service. Every gift, no matter the size, can make a world of difference.

campaign.ucdavis.edu

SPEND OUR
\$10K

You read that right. UC Davis Foundation is donating \$10,000 to benefit the university, but hasn't decided where.

That's where you come in.

Scan this QR code and answer a few questions about our magazine for the chance to make a big difference. Where would you give \$10,000 at UC Davis to build a better world?



Visit campaign.ucdavis.edu/survey for official contest rules and to complete the *In Greater Focus* magazine online survey.