

UC Davis Veterinary Medicine

75 Years of Exceptional Care and Innovation

Envisioning the Future of Veterinary Medicine



A Message from the Dean



As we reach the halfway mark of our school’s 75th anniversary year, I’ve been envisioning the future. Until recently, the pace of change in veterinary medicine has been mostly incremental. Entire careers could be spent grinding away on single diseases or scientific insights. Discoveries were hard won and served as building blocks for further innovation.

That pace has now accelerated. With the help of growing computing power and artificial intelligence (AI), we are witnessing the early stages of exponential knowledge progression. New approaches are also changing the way that we address research and innovation—both big data and collaboration are becoming essential to success. We increasingly see the urgency of the One Health approach: viewing animal, human and environmental health together.

Fortunately, UC Davis is providing leadership in all these areas, and we are fortunate to have several advantages that position us well for the future. We have an incredible historical patient data trove to anchor our AI research. We have a history of partnerships within UC Davis—one of the nation’s most comprehensive universities—as well as across the world. The One Health approach developed at the school is embedded in our mission. In addition, thanks to donors and public support, we are able to provide affordable education to our DVM students, nurture veterinary scientists, and train the greatest number of specialists in the world.

We are not doing it alone, and more investment is needed in veterinary education and medicine overall. With this issue of *Synergy*, we offer insight into the future of veterinary medicine—not just to see the path forward, but also to generate excitement for meeting the opportunities and challenges ahead.

Mark D. Stetter, DVM, Dipl ACZM
Dean

◀ The drone shot, taken on the launch of our 75th anniversary celebration year, captures some of the change makers in our UC Davis veterinary community. Photo: Vu Dao and Kevin Ulrich

Other events during the launch weekend included class reunions and school tours. Photos: Trina Wood



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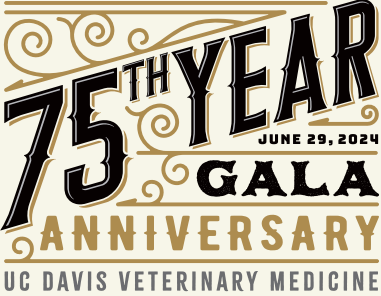
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FOR MORE
GALA
INFORMATION





Rift Valley fever can be transmitted from livestock to people who care for them, such as this woman in Tanzania. (Courtesy of Misty Richmond and HALI project)

Rift Valley fever, or RVF, can cause a severe viral hemorrhagic fever and other disease syndromes that affect both people and domesticated livestock animals. Large-scale outbreaks are often

Combating Rift Valley Fever

Researchers at the school's One Health Institute have been awarded \$28 million to lead a novel human vaccine trial against Rift Valley fever virus in Africa. The project aims to work with partners in African countries affected by the virus to assess the safety and immune response of the vaccine in people most at risk. It is funded by the Coalition for Epidemic Preparedness Innovations and the European Union's Horizon Europe program.

linked to heavy rainfall and flooding when the virus spreads to people either through mosquito bites, or contact with infected livestock and virus-contaminated meat and fluids.

In humans, the majority of infections lead to a mild to moderate illness. However, in some cases RVF is much more severe with symptoms ranging from joint and muscle pain, to vision loss and blindness, liver and neurological damage and hemorrhagic fever.

RVF outbreaks in livestock cause the sudden death of large numbers of pregnant animals, and mortality and illness in young ones. Infection leads to so called "abortion storms" with spontaneous loss or developmental abnormalities that can affect up to 90% of pregnant animals.

These losses are especially impactful across rural Africa. In Tanzania, more than 30% of households depend on livestock. Although animal vaccines are available, their use is not widespread. RVF outbreaks decimate family livelihoods through not only direct human health impacts, but also the large-scale loss of livestock, food products and income.



A deadly version of avian influenza is behind an outbreak in wild birds. The virus has also been detected in mammals, although there is no evidence of widespread transmission in animals other than birds.

islands nearby, and many marine mammals swim in the surrounding waters. It will be critical to monitor wild populations to learn more about how the virus is spreading, what species might be most at risk and what conservation actions might be needed to help them recover, scientists said.

Bird Flu Racing to Antarctica

Over the last three years, a highly lethal form of avian influenza known as H5N1 spread across Europe, Africa and Asia before jumping across the ocean and setting off the worst bird flu outbreak in U.S. history. The virus resulted in the deaths of nearly 60 million farmed birds in this country alone. But unlike earlier versions of the virus, it has also spread widely in wild birds and routinely spilled over into wild mammals.

Last fall, the virus arrived in South America and raced quickly down the Pacific coast, killing wild birds and marine mammals in staggering numbers. Peru and Chile alone have reported more than 500,000 dead seabirds and 25,000 dead sea lions, according to a new report from a global network of flu experts. Those experts include Drs. Marcy Uhart and Ralph Vanstreels, researchers with the school's One Health Institute's Latin American wildlife health program.

The New York Times, along with international news outlets, reports that scientists are now worried that the virus will make its way to Antarctica, one of only two continents—along with Australia—that have not yet been hit by the pathogen. More than 100 million birds breed in Antarctica and on the



P-22 was re-captured in April 2019 to replace the battery in his GPS collar. Photo: National Park Service

Mountain Lion Mourned Worldwide

When P-22, a Southern California mountain lion, was euthanized last December after suffering a vehicle strike and showing other serious health issues, it became clear how many hearts he had captured around the world.

Veterinary pathologists at the San Diego Zoo discovered that P-22 had serious injuries (some fresh and some older) and confirmed that he was underweight, arthritic and had progressive and incurable kidney disease. He also had a severe parasitic skin infection over his entire body, caused by demodectic mange and a fungus, specifically ringworm.

The school's California Animal Health and Food Safety Laboratory conducted toxicology tests that showed the big cat had also been exposed to five anticoagulant rodenticide compounds, although he had no evidence of poisoning. He was one of the animals followed by the Karen C. Drayer Wildlife Health Center's California Mountain Lion Project.

The death of the 12-year-old cougar who had once graced the pages of National Geographic was covered in the New Yorker's "A Requiem for a Great Cat," and in a eulogy by Beth Pratt of the National Wildlife Federation.

Collaborative Care for Chimp

There is never a dull moment at the UC Davis veterinary hospital, but some days are more exciting than others! Such was the case when Maria, a 22-year-old chimpanzee from the Sacramento Zoo, visited the hospital for an abdominal CT scan that confirmed the presence of a grapefruit-sized mass on her right kidney. After immediate surgery to remove the kidney, the mass was determined to be an oncocytoma, a benign growth that rarely causes symptoms.

Dr. Jenessa Gjeltema, an assistant professor of clinical zoological medicine and the zoo's head veterinarian, said Maria's case is a perfect example of the collaborative relationship between the zoo and the veterinary school. Maria's team of caregivers worked closely with UC Davis specialists in oncology, internal medicine, anesthesia, radiology, surgery, and of course zoological medicine. Her story was featured in popular social media posts.



Maria, a chimpanzee, undergoes a CT scan at UC Davis veterinary hospital. Photo: Trina Wood

Teamwork to the Rescue

Chouchou became a social media darling after UC Davis veterinary oral surgeons repaired his severe cleft palate. Born with an unfused mouth roof, he faced an uphill battle to survive and landed into the right hands when Hannah Shaw agreed to rescue the newborn. Shaw, founder of the Orphan Kitten Club and affectionately known as the Kitten Lady, knew the complexities it would take to get the tiny kitten (only 60 grams) to the point of being able to undergo corrective surgery.

Chouchou needed tube feeding for six months until he was big enough to visit UC Davis for a consultation with the Dentistry and Oral Surgery Service (DOSS).

Chouchou at home in his outdoor catio after his cleft palate surgery at the UC Davis veterinary hospital. Courtesy of @kittenxlady Instagram

When cleft palates are exceptionally extensive, they are challenging to repair due to the lack of available tissues and the high risk of failure.

DOSS faculty members Drs. Boaz Arzi and Stephanie Goldschmidt, along with resident Dr. Elias Wolfs created a multi-stage treatment plan that involved removing some teeth and the corrective surgery to rebuild a palate for Chouchou's mouth to allow him to eat normally.

Six months post-surgery, Chouchou is doing well and was recently adopted by Shaw and her husband, Andrew Marttila. Shaw's Orphan Kitten Club supports many initiatives at UC Davis, including the school's student-led rescue, the Orphan Kitten Project, and many kitten-based research projects. You can see more of Chouchou on his Instagram, @crustmuppet.

New Insights into Toxoplasma

Toxoplasma gondii is a common parasite hosted by wild and domestic cats and shed in their feces. Although healthy humans rarely experience symptoms, toxoplasmosis can cause miscarriages and neurological disease.

A recent analysis presented by doctoral student Sophie Zhu and colleagues in the journal *PLOS One* suggests that wild, stray, and feral cats living in areas with higher human population density tend to release—or “shed”—a greater amount of the parasite. The study also draws links between environmental temperature variation and parasite shedding.

While the findings do not establish any causal relationships, they do suggest that rising human population density and temperature fluctuations may create

environmental conditions that exacerbate the spread of *T. gondii*.

Sea otters are especially vulnerable to *Toxoplasma* infection because they live near the shoreline where they may be exposed to the parasite’s eggs in rainwater runoff, and they eat marine invertebrates that can concentrate the parasites.

Although toxoplasmosis is common in sea otters, a recent study identified a rare strain of the parasite, previously unreported in aquatic animals, as responsible for the deaths of four sea otters that stranded in California. This rare strain is likely a recent arrival to the California coast. Scientists warn that it could pose a public health risk if it contaminates the environment and the marine food chain.



Sea otters, like this one at Moss Landing, Calif., are especially vulnerable to *Toxoplasma* infection. Photo: Trina Wood

Understanding Equine Evolution

Eighteen million years ago, a genetic duplication event coincided with the evolutionary split between horses and their four-toed, forest-browsing ancestors. A recent study in the journal *PLOS ONE*, led by Dr. Danika Bannasch and Kevin Batcher, a Ph.D. student in her lab, investigated specific genetic duplications in horses, finding evidence of important roles for these elements.

A certain class of genetic variation in animals is caused by an element called LINE-1 (long interspersed nuclear element 1), which is still active and capable of making new copies of itself and sometimes copies of other genes, called retrocopies. The study investigated these extra gene copies in horses and other domestic and wild equids. Of the 437 retrocopies identified, only five were shared between horses and other equids, indicating that the majority of the extra copies formed after the species experienced an evolutionary split.

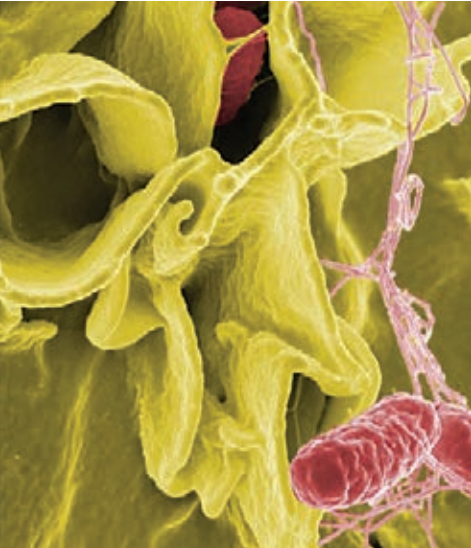
In particular, a retrocopy of the gene Ligand Dependent Nuclear Receptor Corepressor Like (LCORL) was present in all equids (horses, donkeys, zebras) but absent from other species of odd-toed ungulates alive today, such as rhinoceroses and tapirs. This retrocopy was also duplicated many times within equids, with the majority of LCORL tissue expression in horses and donkeys originating from these retrocopies rather than the parent gene. Bannasch said this role of LCORL was exciting to identify since the gene is also known to have a significant role in body size across mammals.

The original retrocopy, estimated to have occurred 18 million years ago, happened during the period when equids experienced an increase in body size, a reduction in the number of toes, and changes in their teeth. The age of the LCORL retrocopy and the large number of expressed LCORL retrocopies in today’s equids provide evidence of their function in equid evolution.



More genes may have led to fewer toes in equid evolution. Photo: Birgit Forest Smith

Steps Toward a Salmonella Vaccine



Salmonella bacteria (red) cause up to a million deaths a year worldwide. Credit: Rocky Mountain Laboratories, NIAID, NI

Salmonella infections cause a million deaths worldwide each year. Improved vaccines for both typhoid fever and non-typhoidal Salmonella disease are urgently needed. New work published in *Proceedings of the National Academy of Sciences* shows how memory T cells, crucial for a vaccine that induces a powerful immune response, can be recruited into the liver in a mouse model.

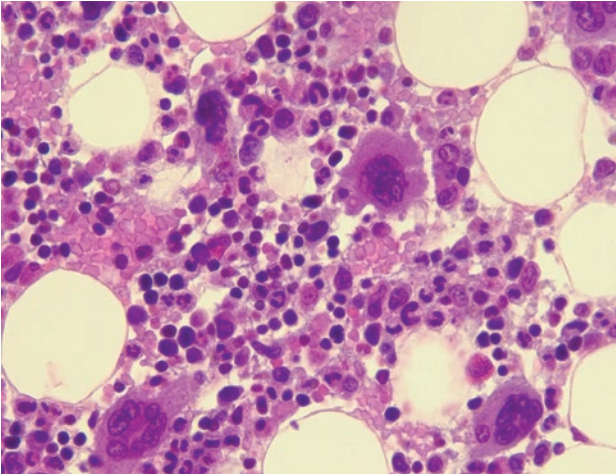
“Understanding the immunology is key to developing a better vaccine,” said Professor Stephen McSorley, Department of Anatomy, Physiology and Cell Biology and senior author on the paper.

A type of immune cell known as “tissue-resident memory cells” appears to be key to Salmonella immunity in mice. Usually, when a pathogen enters the body, the immune system mounts a response, which includes CD4 T-cells that support other responses such as antibody

production by B-cells. Post infection, some of the cells specific to that pathogen remain as memory cells, ready to respond quickly if the same threat returns. In the mouse model of Salmonella infection, those CD4 memory T-cells don’t circulate around the body. They instead stay in the liver as tissue-resident memory cells.

Claire Depew, a graduate student in the McSorley Laboratory, took CD4 T-cells specific for Salmonella and transferred them into mice that had never been infected. The molecules that promote inflammation, especially interleukin-1 and 2, enhanced formation of Salmonella-specific CD4 tissue resident memory cells in the mice. This provides a rapid response that can act quickly against Salmonella infection. These results will help with the design of new vaccines for Salmonella.

Advancing Osteosarcoma Research



Human bone marrow under the microscope. UC Davis researchers have developed engineered bone marrow, which can be used to study treatments for osteosarcoma, one of the deadliest cancers in humans and dogs.

A groundbreaking material—engineered bone marrow (eBM)—has the potential to improve treatment for osteosarcoma, a malignant bone cancer with low survival rates. A new study involving UC Davis researchers published in the *Proceedings of the National Academy of Sciences* describes eBM’s potential. This includes helping researchers learn how bone marrow cells affect osteosarcoma growth, testing cancer therapeutics, and potentially personalizing treatment.

Osteosarcoma is the most common primary bone cancer in children and adolescents, usually affecting children under age 13. Survival rates are low: less than a 25% 5-year survival rate for children with metastatic cancer. It is also the primary bone tumor in dogs, often requiring limb amputation.

Researchers usually study osteosarcoma in flat, artificial cultures that fail to mimic the tumor environment, or mouse models with many variables that scientists can’t control. This new material will allow researchers to better study how these tumor cells grow and respond to drugs, explained Kent Leach, professor of Orthopedic Surgery and Biomedical Engineering at UC Davis and the corresponding author on the paper.

“This work is very exciting because it lays the foundation for a technology that could be used to help veterinary and human patients alike,” said Katherine Griffin, a study coauthor and dual DVM/Ph.D. candidate under Leach’s mentorship through the Veterinary Scientist Training Program at the UC Davis School of Veterinary Medicine. “By providing a realistic bone marrow niche for study in the traditional lab setting, it opens doors for new discoveries.”



Envisioning the Future

By Trina Wood

After pioneering veterinary medicine for three quarters of a century, UC Davis is poised to take ambitious leaps forward. From artificial intelligence (AI) to precision medicine, technological advances are shaping the future of research discoveries, patient diagnosis and treatment, and the learning environment.

Exploring Artificial Intelligence to Benefit Animal Health

AI is already ubiquitous in our daily lives—through our smartphones, voice assistants, travel apps, ecommerce and much more. Technology that uses AI is also on the rise in other areas like healthcare. Using a data-driven approach, AI may be able to help doctors diagnose diseases more efficiently.

Dr. Stefan Keller, an assistant professor and pathologist, specializes in diagnosing animal diseases. A large part of his research is directed toward improving healthcare outcomes by using data to make more informed diagnostic decisions. To that end, Keller and colleagues from the school's Artificial Intelligence in Veterinary Medicine Interest Group are exploring ways to use AI in three different projects.

In the first project, the group is developing a machine learning algorithm (called a “classifier”) that uses historical patient data to reduce errors in the interpretation of blood tests and avoid inaccurate diagnoses. The project—funded by the UC Davis Venture Catalyst Science Translation and Innovative Research grant program in 2022—is focused on identifying disease patterns in animals using laboratory data and AI tools, and helping clinicians consider different diagnoses.



“At the end of the day, we’re trying to
provide the absolute best care and
AI is just another tool that we have at our disposal.”
— Dr. Krystle Reagan

“We have thousands of standard blood work data from the past decades,” Keller said. “If we take all that and run it through our algorithm, we can predict what disease the pets might have and what the prognosis might be.”

While the initial application is for dogs, the team sees opportunities to adapt the tool for other species, including cats and horses.

In the second project, the team is investigating inflammatory bowel disease in aged cats to assess inflammation levels. In the current system using microscopes, there’s a discrepancy in how pathologists assess or grade inflammation. Training the classifier to recognize different inflammatory cells will allow standardization of inflammation assessment, which is important because it affects how clinicians treat patients.

This leads to the third project of hosting the classifiers on a platform to help with clinical decision making. Currently, scientists have to manually pull the data from a patient database onto a computer, run the classifier on that data locally, and then provide the information back to the clinician. Keller’s team is working to cut down that time-consuming, manual process by hosting the classifiers on a shared

platform called Animal Health Analytics and feeding the patient data directly into it so the patterns can be detected in real time. The project is conducted in collaboration with the school’s Information Technology (IT) service and involves clinicians and colleagues including Dr. Krystle Reagan (pictured to the right), who developed the classifiers.

In terms of AI adoption, Keller thinks veterinary medicine presents an interesting landscape, adding that training data is more easily obtained in veterinary medicine than in human medicine and so far, there are no rules around the use of AI algorithms for diagnostic use. However, the pitfalls of the technology and the attitude of users are very similar in veterinary and human medicine. Thorough testing, feedback and objective analysis will be crucial to successful adoption of new technologies.

“If you’ve done things the traditional way for decades, you might be reluctant to adopt an AI algorithm, and then believe in the results,” Keller said. “Transparency of the method is important but with many AI algorithms there is some black box analysis that comes into play, and that is potentially concerning for users. We have to see how we can address that.”

AI to Improve Client Experience

While the rise in technological advancements may seem to be occurring at a rapid pace, Reagan said clinicians have been incorporating new technologies into how they practice medicine since they started. For example, over the course of 300 years, the stethoscope has evolved from a paper tube to a horn-shaped instrument, to a binaural stethoscope, and finally to an electronic form.

“Now that we have stethoscopes that have AI built into them to amplify the sound of heart murmurs, we’re adopting those because it is the best thing for our patients,” Reagan said. “At the end of the day, we’re trying to provide the absolute best care and this is just another tool that we have at our disposal.”

As an internal medicine specialist, Reagan’s research focus is in the assessment of novel therapeutics for companion animal infectious diseases such as feline infectious peritonitis, as well as the development of rapid diagnostic tools that may use AI for clinical decision making. (Read more about these AI applications in Clinical Updates on page 28.)



*Dr. Krystle Reagan is leading a team developing artificial intelligence programs to rapidly improve diagnostic times for certain diseases.
Photo by Mike Bannasch*

Reagan says AI can help veterinarians meet the workload explosion by serving as a scribe in the exam room, scheduling patients, and triaging the urgency of client phone calls. She also anticipates that AI will be used in the future to help take a patient’s medical history before the client shows up at the hospital.

“We’re exploring various ways to address client concerns, get to the bottom of an issue more quickly and improve the veterinarian’s satisfaction with history taking,” Reagan said.

Precision Medicine

Precision medicine is also on the horizon for veterinary patients in much the same way it is now being applied in human medicine. This is an emerging approach for disease treatment and prevention that takes into account individual variability in genes, environment, and lifestyle. Clinicians may use precision medicine to help identify people who may be at high risk for particular cancers or it can be used to determine which tests and treatments are best.

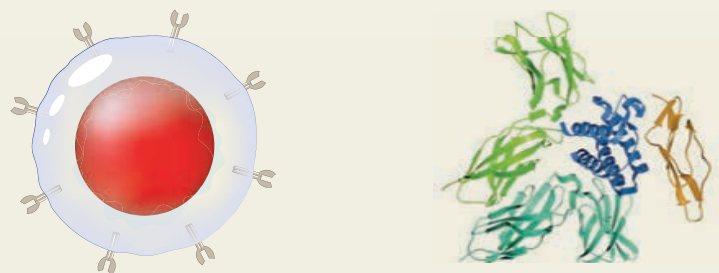
Dr. Robert Rebhun, veterinary oncologist, sees this approach evolving in veterinary medicine. He collaborated with Dr. Robert Canter, a human surgical oncologist, to conduct a novel clinical trial on an inhaled immunotherapy drug for dogs with cancer that had spread to the lung.

The dogs were treated with protein interleukin-15 in an effort to trigger the body’s defense mechanisms—T-cells and natural killer cells—to respond and destroy invading cancer.

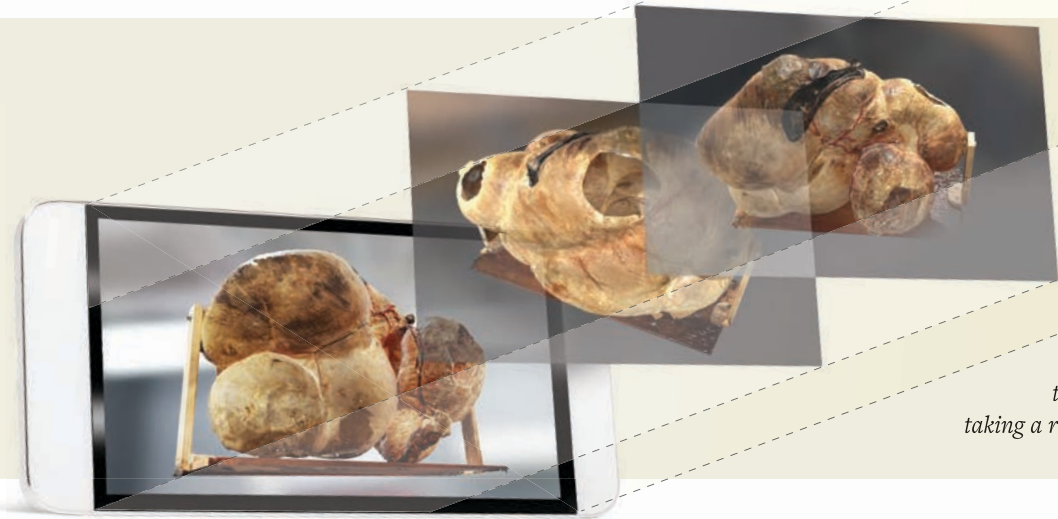
Tumors shrank dramatically in two of the 21 dogs enrolled in the study, including one that went into complete remission for more than a year. Cancer that had been growing rapidly in five other dogs stabilized for several months.

“We had some amazing responses, but a lot of dogs didn’t respond,” Rebhun said.

Precision medicine is an **emerging approach for disease treatment** and prevention that takes into account **individual variability** in **genes, environment, and lifestyle.**



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When looking at a cow rumen in a 3D modeling platform, a student can explore the outer surface and then travel inside, much like taking a ride on the Magic School Bus.

“The question is why. The next research study (recently funded by the National Institutes of Health) will allow us to look specifically at not only what the genetic pathways look like in canine osteosarcoma, but what the baseline immune system looks like.”

That knowledge will allow Rebhun and other veterinary scientists to better predict which dogs may do well with that specific inhaled immunotherapy or allow them to customize immunotherapies for treatment.

“The more we learn every year about mutations in canine, and even feline cancers, and the apparent pathways that have led to particular tumors, the closer we are to using that information to improve patient outcomes,” he said.

Dr. Carrie Finno’s laboratory has partnered with the school’s Center for Equine Health (CEH) and Platinum Performance on the “Pioneer 100 Horse Health Project,” a first-of-its-kind precision medicine study in horses. The project has been gathering data, including whole genome sequencing, on 100 CEH teaching herd horses who live at the center. The goal is to be able to create a scientifically sound wellness program using a combination of multi-omics (genomics, proteomics, metabolomics, etc.) approaches focused on disease prevention.

The advantage of using this population to establish a database is that researchers have access to their medical records and can control many aspects of their environment, such as their diets, limiting variables in a way that would not be possible if horses were housed at different locations. In addition, the majority of these horses are long-term residents, meaning that researchers can follow their health and associated data over time.

“In the future, genetic data and advanced diagnostics could be used to tailor medical treatments to an individual horse’s genetics, its environment, and the interactions between the two,” said Finno, an equine internal medicine specialist and veterinary geneticist who serves as the CEH director. “Data from this project could help evaluate, for example, how a particular patient is likely to respond to one drug versus another, making it possible to target treatments for the most successful outcomes.”

Josie is one of the dogs who responded well in a clinical trial for cancer. Courtesy photo



Enhanced Learning and Assessment

When the COVID-19 pandemic forced classes to go remote for a period of time, it highlighted the need to adapt technological innovations for engaged remote learning. Dr. Joie Watson, associate dean of professional education, said anatomy instruction was one of the first things that came to mind in exploring how technology could support the DVM curriculum.

Justin Ross, multimedia developer on the school’s IT team, collaborated with Colorado State University—who has been developing 3D virtual learning for the past several years—to create the 3D Virtual Reality Project for UC Davis. With the help of Sketchfab (a 3D modeling platform), the project offers a way to explore assets that once would have only been available in a laboratory space—specimen samples like an equine femur, elephant skull or a bovine rumen.

Some of those assets, like the cow specimen, are old and fragile and in danger of falling apart. Watson explained that this technology allows them to be preserved for many more people to access and learn from over the years, from any location.

The 3D specimens can be viewed on any mobile or desktop browser, or virtual reality headset. When looking at the cow rumen, a student can explore the outer surface and then travel inside, much like taking a ride on the Magic School Bus.

This approach allows visibility from anywhere and safeguards valuable assets that are difficult to find and put together.

“We’re able to connect people through technology with resources that we used to think of as anchored in a specific space,” Watson said. “The future may involve students being in a virtual reality space and a teacher could be there simultaneously accessing a resource together. We’re not there yet, but that’s part of what we see as the possibility.”

Capturing learning moments during clinical rotations at the veterinary hospital is another area where Watson said technology will come into play. In a dynamic hospital environment where clinicians are busy, talking to clients and taking care of animals, there isn’t much time to check off boxes on a skillset assessment for students.

So, the IT department has put together a brief assessment tool, to be used on a cell phone, that they hope to pilot soon. Within the app, clinicians can enter comments using talk-to-text transcription and links to “just-in-time” assessment. In this way, faculty members can provide feedback in a way that is seamless.

“Students are always looking to improve toward Day 1 competency after graduation,” Watson said. “This tool will help enhance their learning.”

Neelanjana Gautam from the UC Davis Office of Research provided the reporting on Dr. Stefan Keller’s work.

BUILDING A DIVERSE PIPELINE

By Trina Wood with Monae Roberts

IT'S NO SECRET THAT THE VETERINARY FIELD LACKS DIVERSITY. ACCORDING TO 2022 DATA FROM THE BUREAU OF LABOR STATISTICS, APPROXIMATELY 91.4% OF DVMS NATIONWIDE ARE WHITE, 4.3% ARE ASIAN, 2.2% ARE BLACK, AND 0.5% ARE HISPANIC/LATINX.

Increasing diversity, equity, inclusion, and belonging (DEIB) in this career path starts with attracting a diverse pool of applicants to veterinary school. Nationally, more than 70% of the total DVM student population is white. All other ethnic and racial backgrounds are considered underrepresented in veterinary medicine (URVM). This makes UC Davis one of the most racially and ethnically diverse DVM programs in the nation, with almost 50% URVM representation.

But, there's still a long way to go if we are to achieve our goal to attract, recruit, and foster diversity and inclusion in student, faculty and staff populations reflective of California demographics.

We sat down with Monae Roberts, the school's Chief Diversity Officer to ask about the challenges and successes of attracting more diverse DVM applicants.

What have been some of the biggest barriers historically in encouraging students from diverse backgrounds to apply to veterinary school?

We recently addressed one of the major hurdles when UC Davis dropped the Graduate Record Exam (GRE) requirement for application. We joined the majority of accredited U.S. veterinary schools in making the shift after studies showed systemic bias in the GRE. It has been argued that the test (based on verbal, quantitative and analytical writing) does not predict student success in the sciences, as the exam does not demonstrate an applicant's understanding of science. The removal of the GRE has already shown to increase the applications by 67% from the previous year. Additionally, we moved our interviews from in person to online, which reduces the financial burden of travel, taking time off from work or school, etc.

Overall, we have seen an increase in racial/ethnic diversity in admitted students over the past four years (multiethnic, Asian, Latinx). There are some racial/ethnic groups that have remained stagnant (Native Hawaiian, Native American, Black) over the past four years so this remains a priority.

What are key initiatives that Davis has undertaken/launched in the past several years to increase engagement with undergrads from diverse backgrounds?

While plans have been made to better engage underrepresented students, the COVID-19 pandemic has made it challenging to implement changes.

Fortunately, Dean Mark Stetter has made it a priority by including DEI as one of the pillars in the school's strategic priorities. There has been a large increase in information sessions delivered to universities that have been previously less accessible. There are plans in the works to attract undergrads from Hispanic Serving Institutions and Historically Black Colleges and Universities into our summer programs. There are also plans to attend STEM conferences focused on diverse communities to attract a more diverse applicant pool.



How early does this engagement really need to start?

Statistics show that students should be introduced to career paths as early as eight or nine years old.

How does the recent Supreme Court decision regarding the use of race in college admissions affect our admissions policies?

The Supreme Court decision regarding race in college admissions will not ultimately affect our admissions policies because of proposition 209, which is already in place and essentially mimics the court decision for the state of California.

What are the current challenges and what are the plans to address them?

We still hear from kids in underrepresented communities that they lack awareness of veterinary medicine as a potential career path.

So, we are trying to reach them early through programs such as League of VetaHumanz, VetMed Youth Camps, VetMed Exploration Academy, and Vets of the Future/Future Day.

The financial burden of veterinary school remains a challenge. Thanks to strong donor support at UC Davis, we're able to offer approximately \$4.5M in scholarships annually. We're working to increase that amount and expand the scholarships we're able to award students over time.

Another challenge is lack of access to veterinarians. We're expanding our Summer Enrichment Program, which provides opportunities for undergraduate students to gain necessary experience with veterinarians, as well as mentorship with clinicians and current DVM students.

Are there more 'hidden' forms of diversity in terms of sexual orientation or other identities that we need to be more conscious and supportive of?

Yes, there are definitely hidden forms of diversity and we are conscious and intentional in being inclusive regarding these aspects of diversity in addition to race/ethnicity. We have made changes to our data collection processes to allow students to indicate pronouns, and update their lived-name and gender marker. We are also becoming more intentional with supporting our students who may require a space for reflection purposes, including anyone who may be a part of any spiritual community.

Creating a diverse, equitable, and inclusive veterinary community demands sustained effort, continuous improvement, and accountability. Our community is committed to lasting change, but it will take all of us to make a difference.



Clockwise from left: Wildfires are becoming more frequent in California. A student VERT volunteer treats a horse at an evacuation center in a past wildfire event. Will Burke, associate director of planning for CVET, at an information booth during the PacVet Conference. A mobile command will allow for enhanced veterinary care in the field. Dr. Briana Hamamoto '22 joined CVET as an operations specialist.



At The Ready

By Eunah Cho Preston

Evacuating, sheltering and caring for animals are enormous tasks made more difficult during disasters like wildfires. But the California Veterinary Emergency Team, or CVET, is ready to lead a statewide coordinated effort of veterinary care when disasters strike.

Administered by the school's One Health Institute, CVET supports and trains a network of government agencies and organizations to aid domestic animals and livestock during emergencies.

"Although we hope to never see disasters, we know that when they come they can be devastating to our pets, horses and livestock," said Dean Mark Stetter. "I'm glad that we are ready to help the next time there is a need."

This fire season, CVET is ready to provide counties across the state with veterinary support when local resources have been exhausted and state assistance is needed.

A Mobile Command

CVET is equipped with numerous response trailers of various sizes that will serve as mobile in-field hospitals and exam rooms for injured animals, as well as a horse trailer and several vehicles. A 44-foot trailer is currently being retrofitted to provide additional exam space, as well as sleeping quarters for veterinarians, should the team be called to a remote location.

"Having ready-to-go resources on hand allows our veterinary team to show up

with the resources to provide exceptional veterinary care in the field, treating burns, injuries, and other conditions as the need arises," said veterinarian Ashley Patterson, CVET's associate director of operations.

Transition from VERT

With the formation of CVET, the personnel, equipment, knowledge and legacy of the previous UC Davis Veterinary Emergency Response Team, or VERT, was folded into CVET. This expanded UC Davis' veterinary disaster response capacity from a local county effort to a statewide response. UC Davis VERT typically triaged, evaluated, treated or rescued more than 1,000 animals every wildfire season.

Today, CVET has a team of dedicated full-time staff who are responsible for the operations and management of the program and its growing network of veterinary professionals.

An Aggie Returns

Dr. Briana Hamamoto recently joined CVET as an Operations Specialist. No stranger to UC Davis, she received her DVM as well as her Ph.D. in Pharmacology and Toxicology from the school in 2022. While in veterinary school, Hamamoto was heavily involved with VERT, first as a volunteer responder and eventually serving as President of sVERT (the student club for VERT responders).

Additionally, Hamamoto serves as the Emergency Response Committee Chair for the Northern California Association of

Equine Practitioners Emergency Response Team, gaining further valuable experience responding to multiple major wildfires in Northern California.

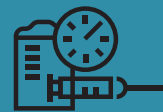
Following graduation from veterinary school, Hamamoto worked as an associate equine practitioner in Auburn, Calif., during which time she was invited by Placer County to serve as a veterinarian for the Mosquito Fire response in 2022. Her dedication and expertise in veterinary medical disaster response has brought her full circle to where it all began to help CVET enhance statewide veterinary preparedness, as well as provide veterinary care to animals during disasters.

Next Steps

In addition to response, our program supports and trains a network of government agencies, non-governmental organizations, and individual veterinary professionals to assist in the veterinary care of animals during emergencies. Our responders receive training in the incident command system, all hazards safety and CVET operations. In addition, we plan to offer numerous specialized training opportunities including shelter-in-place support, technical animal rescue, working dog support and many others.

If you are a veterinary professional and would like to learn more about joining CVET as a responder, please contact cvet@ucdavis.edu.

www.CVETucdavis.org



Second Chances

While Dr. Dolittle may have “talked” to the animals, it’s the capacity to listen that gives Dr. Jackie Gai ’01 guidance in treating the wildlife who live with the Performing Animal Welfare Society (PAWS).

“My approach to my practice is to be of service to my patients, many of whom have histories of abuse or neglect. I ask them, how can I help or serve you?” Gai said. “This isn’t about me; it’s about them. Putting my ego aside quiets my mind and helps me ‘hear’ the cues they give me; it’s almost a meditation. Their energy is a humbling experience.”

Gai has worked with PAWS for more than 20 years, starting shortly after graduating from the UC Davis School of Veterinary Medicine in 2001. During a short post-grad stint at a small animal practice in Marin County, Gai got a call out of the blue from Pat Derby, PAWS’ beloved late founder.

“She was looking for a veterinarian with elephant experience who was concerned about their welfare,” said Gai, who now serves as director of veterinary services for PAWS. “It was the perfect match.”

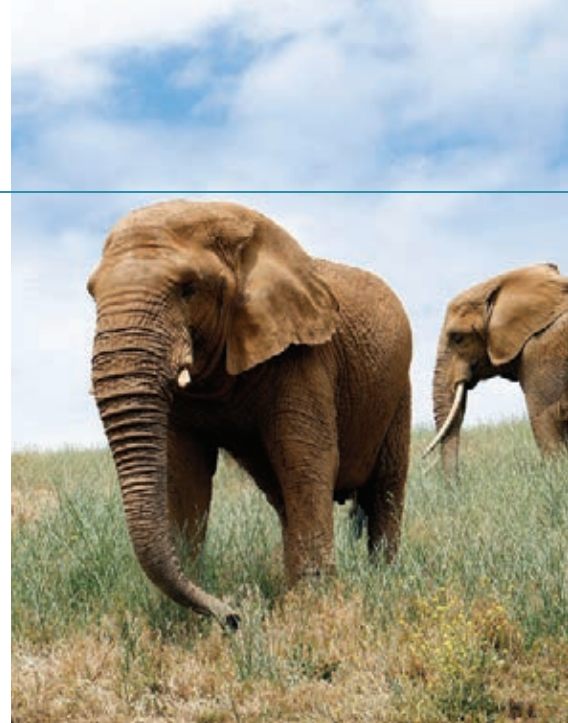
Gai became passionate about animal welfare issues in captive wildlife while working as a zookeeper and veterinary technician at the Oakland Zoo, years before pursuing her DVM. One of the African elephants had

a surprise birth in 1995. The calf, named Kijana, was rejected by his mother (not uncommon in captive elephants, but rare in the wild) so Gai and seven other keepers cared for him around the clock.

Despite his careful hand-raising and care, Kijana died of a herpes virus infection at 11 months old. He was only the second elephant in the U.S. to come down with the disease and the first African elephant.

That experience made Gai more acutely aware of medical issues brought about by captivity that aren’t adequately addressed by exotic animal medicine textbooks. It also awakened a passion for the welfare of all captive wildlife that she carried into her role at PAWS.

The sanctuary was founded in 1984 as the first elephant refuge in the country and now includes a 2,300-acre site in San Andreas, Calif. that provides a home for former victims of exotic and performing animal trades. Residents currently include seven tigers, seven elephants, two black bears, two adult capuchin monkeys, a mob of emu, and an elderly Indian muntjac.



By Trina Wood

Photography by Vu Dao and Trina Wood

◀ Dr. Jackie Gai has served the animal residents at PAWS for more than 20 years. From top right: Lulu and Toka are two of seven elephants who live at the sanctuary. Gai checks on Mojo, an Indian muntjac. Rosemary is one of seven resident tigers.

“We can’t return these animals to the wild unfortunately, so in our case, we’re improving their lives,” Gai said. “They often come from limited space where social conflict and a lot of dysfunction can arise. We’re giving them a better version of captivity. It’s not perfect, but it’s the best we can provide.”

The PAWS team of caretakers and veterinarians gets to know each animal that comes into their care as an individual with a different

past and varying needs to feel safe, nurtured and able to live their best lives.

“We give them more agency in making decisions,” Gai said. “Sometimes they need more space or to get away from a bullying situation. It’s an honor to help facilitate their healing—on physical as well as psychological and spiritual levels. And it’s rewarding to see how some of their personalities change after coming to the sanctuary.”

Gai knows from personal experience the value of having someone give you what’s needed for your best outcome. After two other careers in law enforcement and entertainment ticket sales, Gai finally decided to pursue her biggest dream of becoming a veterinarian. She had to work full time while attending night school to finish prerequisites and get over the misconception that she was bad at math and science.

Fortunately, she found a small night class at Oakland’s Merritt College for organic chemistry—often considered the gatekeeper for those wanting to pursue a medical career. She said the instructor was a wild, deep thinker (and also a Sufi dancer!) who got the students fired up about science. Gai sat in the front row, glued to every word.

“He helped flip the switch in my brain and I found out science is fascinating! It’s the basis of all life—that’s not a boring subject!” Gai said.

Once she succeeded there, Gai began chipping away at not only the other prerequisites for applying, but also the many years of a self-doubting voice that had told her she wasn’t smart enough. It took three

attempts to be accepted to UC Davis, but that was the only place Gai would apply. It was where she knew she needed to be.

“There are so many paths to where you want to go in life,” Gai said. “Have patience. Finding your way is not a linear route and it can be easy to become discouraged. Sometimes life experience helps get you there too.”



Dr. Jackie Gai (far left) visits the mob of six emus with their supervisor, Renae, to vaccinate for West Nile virus. “Caregivers are my eyes and ears,” Gai said. “They are truly animal care professionals.”

10:00 am



With caregiver Larry’s help, Gai checks on Mojo, an elderly muntjac. The thermal imaging camera can help pinpoint any inflammation in his antler pedicles after a recent shed.

10:30 am



The five elephant habitats at the San Andreas, Calif. facility commonly known as ARK2000 provide hundreds of acres of varied natural terrain for the seven resident elephants to roam, lakes and pools to bathe in, and barns equipped with heated stalls and an indoor therapy pool. Photo courtesy of PAWS



Nicholas, a 29-year-old Asian elephant, was retired from the demands of the circus.

11:00 am



All of the animal residents are trained with positive reinforcement to allow for voluntary veterinary checks and treatment. Brian, sanctuary manager and elephant supervisor, and Kelly, senior elephant caregiver, provide treats and distraction for Prince as Gai gathers a blood sample from a vein behind his ear.



Dr. Melissa Rothstein ’19 works part time at PAWS as part of the veterinary team. She credits Gai as a mentor who works tirelessly to make the world better for all animals.



Kelly gives Prince jelly beans—his favorite treat—as a reward for offering his foot to Gai for treatment with some medicated clay to reduce inflammation in a few lesions.

11:30 am



Gai gently palpates Prince’s foot and feels for any areas of inflammation. “It doesn’t take long for elephants to learn the positive training, but trust takes longer. Now he’s very cooperative and eager to participate in his own health care.”



Back at the Pat Derby Animal Wellness Center after a lunch break, Gai reviews the most recent radiographs taken of Prince’s wrists, explaining to Rothstein what they look for as signs of arthritis.

12:30 pm



Keeping accurate patient records is never ending for any veterinarian!



Rosemary is one of seven big cats who currently live at PAWS. Gai keeps an eye on their general physical wellbeing and behavior on a regular basis.

1:30 pm



Gai receives contented chuffs of welcome when she stops by to check on Nimmo.



Morris and Rosemary were among eight tigers brought to the sanctuary after being rescued from a Colorado roadside zoo. Through PAWS’ public awareness campaigns, more individuals are becoming aware of the problems inherent in the breeding of wildlife in captivity and the use of animals in entertainment.



By Amy Young

From Snacks to Scraps

Pets and “People Food”

From table scraps to food that falls on the floor, loose garbage can lids, and opportunistic counter surfing, pets have many opportunities to consume “people food.” A piece of pasta slurped up from the kitchen floor is probably not a big deal, but a chocolate bar may necessitate an emergency veterinary visit.

So how do you know which “people foods” your pets can consume and which are hazardous to their health? In many cases, a number of variables come into play, from the pet’s size to the amount of the food in question. Dr. Jennifer Larsen, chief of the Nutrition Service at the UC Davis veterinary hospital, provided insight into which foods are safe for pets, which ones may spell trouble, and how owners can keep their pets happy and healthy.



Pets Are Individuals

It is important to note that pets, like people, are individuals. This means a lot of variability in not only what they like to eat, but also in what they can tolerate.

“Some pets can eat different foods at every meal,” Larsen said. “Others are very sensitive and need a prolonged transition between different types of foods.”

Whether they have a sweet tooth or a low tolerance for fatty foods, eating the wrong thing can lead to short- and long-term medical concerns such as diarrhea, vomiting and pancreatitis. Unconventional feeding practices can result in insufficient or imbalanced nutrients and associated health conditions.

Consider the Calories

Calories are just as important to your pet’s diet as they are to your own. The abundant supply of highly nutritious and high-calorie foods and treats, coupled with less active lifestyles in many cases, inevitably result in the storage of excess energy as fat. Overweight pets are at increased risk for developing diseases such as diabetes mellitus, arthritis and breathing problems.

More than 90% of a pet’s daily calories should come from a complete and balanced diet (commercial diet or home-cooked diet formulated by a veterinary nutritionist specifically for your pet). Additional food items, including treats, should not exceed 10% of the daily caloric intake. Larsen pointed out that calorie-dense human food can exceed the 10% treat allowance quickly, so it is important to ensure these items are only consumed in small quantities. Reference food labels or visit the USDA website for information about the number of calories in specific foods.

Most commercial pet treat products are required to disclose the number of calories on the label. However, the calories in “animal part” treats such as rawhide, jerky and bully sticks are usually unknown and can be highly variable due to size differences. These treats can also be associated with choking hazards, kidney injury, and *Salmonella* contamination, so it is important to evaluate these factors when choosing pet treats.

It is a good idea to discuss with your veterinarian whether specific treats are appropriate for your individual pet.

Xylitol and Other Sneaky Ingredients

Aside from the calories in certain foods, you may be surprised to find undesirable ingredients lurking in some recipes. For example, onions are sometimes present in human foods where they may not be expected. In sufficient quantities, these foods can be toxic to pets, causing a low red blood cell count (anemia) and a variety of associated health problems. Salt is also a concern; high amounts can influence cardiac disease, high blood pressure and kidney disease, or interact with compounds such as anti-seizure medications.

Another important ingredient to watch out for is xylitol, also known as wood sugar, birch sugar and birch bark extract. It is a naturally occurring sugar alcohol found in plants, including fruits and vegetables. A food additive approved by the U.S. Food and Drug Administration (FDA), xylitol is often used as a sugar substitute in hard candies, gum, mints, syrup, jams and jellies, baked goods, nut butters and vitamins. Dental care products such as toothpaste and mouthwash, cough syrup, over-the-counter medications, sunscreens, cosmetics and other products may also contain xylitol.

Xylitol is quickly absorbed into a dog’s bloodstream, unlike most other mammals, resulting in a rapid insulin release. Dogs that ingest xylitol or xylitol-containing products (even in small amounts) can develop hypoglycemia (low blood sugar levels) and liver damage. The clinical signs of low blood sugar can be mild to severe, ranging from lethargy to seizures and death. Xylitol poisoning has not been reported in cats or other domesticated mammals.

Paws Off

Ingestion of foods containing xylitol is a significant concern for dogs. Other foods that your pets should never consume include grapes and raisins, chocolate, foods containing caffeine, and any foods that are going to expand, such as raw dough. Fatty foods such as fish or poultry skin and fatty meats are also of particular concern. Although peanut butter is a popular treat, it is high in fat (and calories) and should only be offered in small amounts.

Clearing Up Some Misconceptions

Although there is consensus on the foods just listed, long and sometimes conflicting lists of foods pets can and can’t eat lead to confusion on this topic. For example, Larsen said that many people think that avocados are toxic to dogs. The leaves of the plant are toxic to other species,

but dogs can safely consume the flesh of the avocado. Just be sure to avoid the pits since they are a choking hazard.

Found on many do-not-eat lists, garlic can actually be an ingredient in some pet foods and treats. Legally, it can only be added for flavor, and the company is responsible for making sure that it is present in a safe amount. Contact the company directly if you have any concerns about the ingredients in commercial pet foods and treats.

Lastly, it is important to be informed about the risks of raw foods to your pet’s health.

“Any raw animal product is not really safe due to potential contamination with bacteria such as *Salmonella*, *E. coli*, *Campylobacter*, and *Listeria*,” said Larsen.

Bacterial infection can lead to gastrointestinal illness in pets which can be transmitted to humans.

The FDA and Centers for Disease Control and Prevention advise against the feeding of raw pet foods due to the human health risks. Professional veterinary organizations, including the American Veterinary Medical Association, American Animal Hospital Association and the World Small Animal Veterinary Association Global Nutrition Committee, among many others, provide position statements and consumer information documents that also warn of the significant risks and lack of benefits to actively discourage the use of these diets to protect animal and human health.



WHAT TO DO IF A PET EATS SOMETHING TOXIC

Despite your best efforts and watchful eye, it only takes a moment for a pet to get into something that they shouldn’t. Remember that every potential toxin is different and may require specific treatment.

“Don’t try to treat a possible toxicity problem at home,” Larsen said. “Don’t try to make your pet vomit. In some cases, it can actually cause more damage.”

Call your veterinarian or poison control center immediately. The sooner your pet receives treatment, the better the chance for a successful outcome.

ASPCA Animal Poison Control Center
888-426-4435, Pet Poison Helpline
855-764-7661.

TOP FIVE TIPS

-  **Keep treats to 10% or less of pet’s daily caloric intake.**
-  **Beware of hidden ingredients, excess salt and xylitol.**
-  **Don’t offer grapes, raisins, chocolate, or foods containing caffeine or extra fat.**
-  **Be informed about the risk of raw foods due to potential bacterial contamination.**
-  **Understand your pet’s individual sensitivities to various foods.**



Celebrating a Legacy of Exceptional Care and Innovation

By Carolyn Sawai

Imagine an extraordinary evening to celebrate UC Davis' 75 years of leading veterinary medicine. On June 29, 2024, the school will commemorate this anniversary with a gala at the iconic Memorial Auditorium in Sacramento—honoring three-quarters of a century of providing exceptional animal care and preparing top-tier veterinary medicine students for careers and service.

The

he 75th Anniversary Gala will include an exciting live auction showcasing one-of-a-kind items and experiences, a cocktail hour, dinner, dancing and an engaging program.

There will also be opportunities to meet the school's world-renowned faculty and outstanding students.

The gala promises to be a memorable event while raising funds for scholarships that will invest in the next generation of exceptional veterinary leaders like Molly Mettler, Class of 2024, past president of the UC Davis chapter of the Student American Veterinary Medical Association.

Mettler decided to pursue a career in veterinary medicine in 2015 after her family had to make the heart-wrenching end-of-life decision for their first dog, Sparkie. Mettler grew up with her beloved canine companion of 15 years and had formed a deep bond with her.

"As someone who has gone through the pain of pet loss, I found it very difficult and was filled with grief," Mettler said. "But that experience also made me wonder how I could offer support to those who were in my own family's shoes."

Mettler has an interest in small animal medicine with an emphasis in emergency medicine, and is the recipient of seven scholarship awards—Ariat Scholarship for Future Veterinarians, Floyd Tuition Support Fund, Frances Park Pillsbury Memorial Scholarship, George and Helen Bailey Memorial Externship Scholarship, Jean Marie Borst-Bright Star Memorial Scholarship, Patrick H. Mills Memorial Entrepreneurship Scholarship, and Student Programs Leadership Appreciation.

"Scholarship support has allowed me to focus more on my studies by alleviating my financial worries," Mettler said. "I am so grateful to my scholarship donors and know it is a shared sentiment among my very hardworking colleagues who have also received support."

Since its inception in 1948, the school has shaped the field of veterinary medicine and set the bar for clinical and scientific discoveries. As the nation's top-ranked veterinary school, educating the next generation of veterinary leaders is at the heart of what we do. Our DVM graduates now total more than 7,000 across the world.

"When I think of our outstanding students, I think of our future," said Dean Mark Stetter. "These dedicated individuals will advance

veterinary medicine for the next 75 years and beyond. It's an honor to guide our school during this celebration and I would like to extend my deepest gratitude to the committee planning our gala."

The committee is comprised of five distinguished members of the Dean's Leadership Council, a volunteer group of professionals who advise the dean on initiatives designed to fulfill our teaching, research, and service mission—Gayle Brock, committee chair, John Klacking, Julia Lewis (DVM '94), Jan Miller and Jerry Rosenthal.

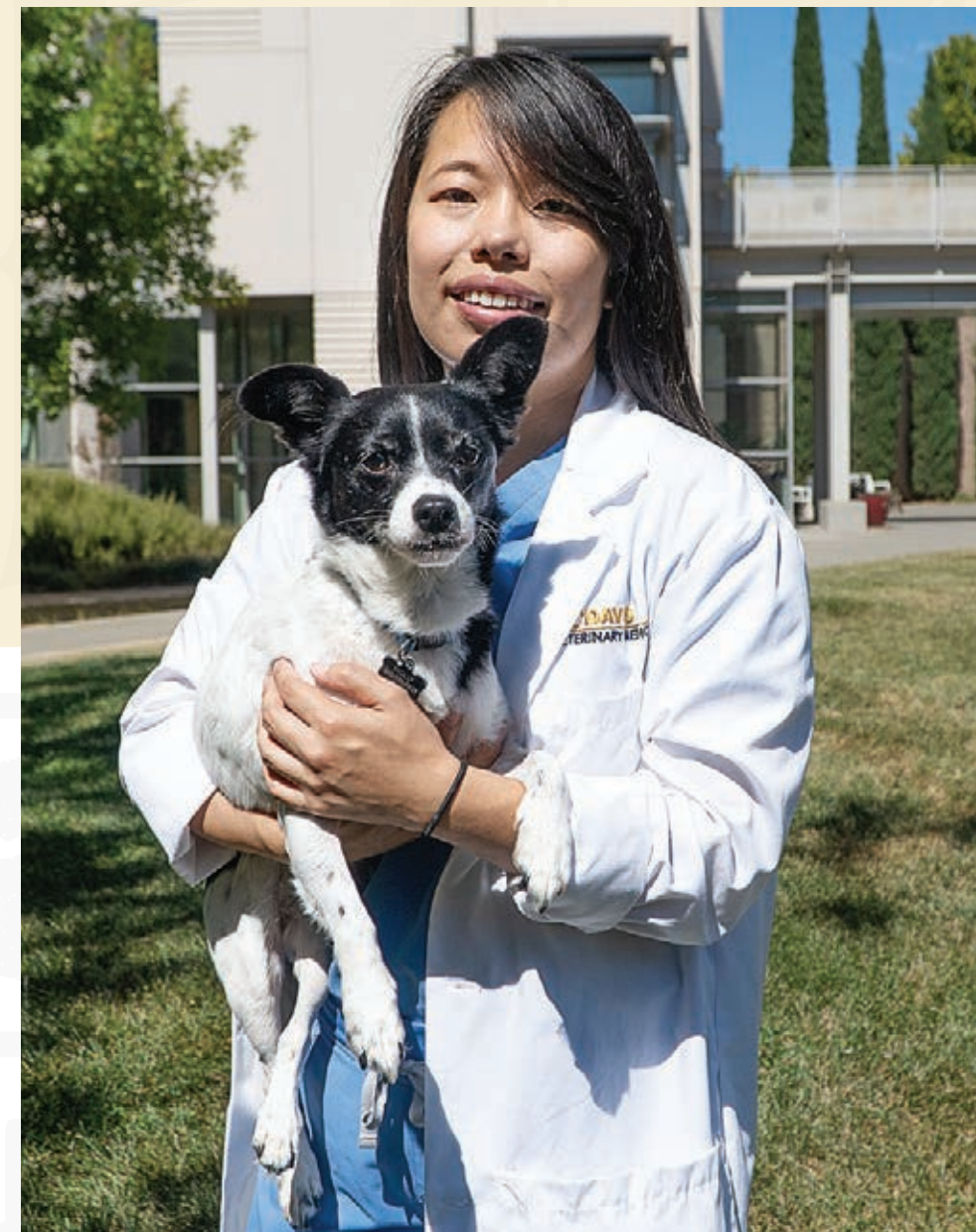
"The School of Veterinary Medicine has performed life-saving services for its patients and groundbreaking research for 75 years," Brock said. "A year of celebrating this milestone anniversary comes to a climax with the gala. To be able to give back and show appreciation during this momentous time is a once-in-a-lifetime opportunity."

Sponsorship and underwriting opportunities ranging from \$10,000 to \$100,000 are available. For more information about these opportunities and tickets to the 75th Anniversary Gala, visit www.vetmed.ucdavis.edu/75th-anniversary-gala or contact the Office of Advancement at vmddevelopment@ucdavis.edu, 530-752-7024.



As the nation's **top-ranked veterinary school**, educating the next generation of veterinary leaders is at **the heart of what we do**. Our DVM graduates now total more than **7,000** across the world.

FOR MORE
GALA
INFORMATION



Molly Mettler, Class of 2024, cherishes her dog Kenny, who has been her constant companion since she adopted him during her sophomore year as an undergraduate student. Photo: Mike Bannasch

The Sacramento Memorial Auditorium opened to the public in 1927 and is one of the most recognizable and beloved buildings in the region.





Top Clinical/Research Advancements Shaping the Future of Veterinary Medicine

In our spring issue, we brought you some of the top clinical and research accomplishments from the past 75 years. Here, we delve into the most current and advanced technologies that will take us into the future.

From new discoveries in imaging modalities to artificial intelligence, innovation now drives the practice of healing animals. UC Davis has always been at the forefront of that progress and continues to forge new ground. As we are building the Veterinary Medical Center, we are setting the gold standard of care while defining translational research and clinical education.

By Rob Warren



Artificial Intelligence

1 Veterinarians at UC Davis have developed algorithms using artificial intelligence (AI) to detect two significant diseases in dogs—Addison's and leptospirosis. For Addison's disease, they used routine blood work from more than 1,000 dogs to train an AI program to detect complex patterns that indicate the presence of the disease. Their algorithm for Addison's disease is more than 99% accurate. Next, the team developed an AI prediction model for leptospirosis, which can cause kidney failure (requiring dialysis), liver disease, and severe bleeding into the lungs. When recognized early, the disease can be treated effectively in 90% of dogs. Blood samples from more than 400 dogs, which included only nine that were positive for leptospirosis, were used to train an AI program. When completed, the program achieved 100% sensitivity, correctly identifying all nine samples. Quicker detection through AI will allow veterinarians and pet owners to make critical decisions in a timely manner. These breakthroughs hold tremendous potential for the development of future AI tools to optimize detection of other veterinary diseases. Read more about the uses of AI in veterinary medicine in our feature story on page 8.



Advancing Equine PET Scan Technology

2 In 2015, the world's first equine positron emission tomography (PET) scan was completed at UC Davis on the leg of an anesthetized horse. Radiologists, working with private industry, continued to advance this new technology, and in 2019 created the first standing PET scanner that only requires a horse to be mildly sedated. After many prototype iterations, the current MILE-PET® scanner was developed. Research has confirmed the value of PET, especially in the horse racing industry, and the technology has proven superior to bone scans in assessing the racehorse fetlock. PET also demonstrated its ability to monitor injuries over time, predict the amount of time needed to heal, and help prevent catastrophic breakdown injuries. Thanks to UC Davis' success in pioneering PET, scanners are now in place at some of the most renowned racetracks in the world, including Santa Anita Park and Churchill Downs, as well as leading equine hospitals such as Kentucky's Rood & Riddle Equine Hospital (founded by UC Davis alumnus Dr. Bill Rood) and the World Equestrian Center Hospital in Florida.

*Top left:
Dr. Krystle Reagan is leading a team developing artificial intelligence programs to rapidly improve diagnostic times for certain diseases.
Photo: Mike Bannasch*

*Top right:
Dr. Mathieu Spriet has taken positron emission tomography from initial inception, through several prototype iterations, to the first widely available scanner.
Photo: Don Preisler*

Expanding Orthopedic Surgery

3 Over the past five years, Orthopedic Surgery Service faculty have taken their program to new heights. With greater demand for their services, the school recently opened the Center for Advanced Veterinary Surgery (see page 34). As some of the foremost authorities on orthopedic surgeries, their translational research is setting the standard of care for their specialty. One of the most sought-after surgeries is a total hip replacement, now able to be performed using custom-fitted, 3D-printed titanium implants. One of the first UC Davis patients to receive this new type of hip implant was Dexter, a German shorthaired pointer, who had been hit by a car. Utilizing exact measurements of Dexter's anatomy from a CT scan, a new hip was crafted, consisting of a cup affixed to his pelvis using two cortical screws and two locking screws, and a custom stem implanted in the top of his femur. With many breeds predisposed to hip disorders, these surgeries hold great promise for healthier extended lives.



Revolutionizing Soft Tissue Surgeries

4 The use of real-time imaging modalities to perform minimally invasive procedures—known as interventional radiology (IR)—is revolutionizing surgeries for companion animals. The Soft Tissue Surgery Service is a world leader in this field and has created many therapeutic breakthroughs. Zeke, a 14-year-old beagle/cocker spaniel mix, traveled from Colorado for liver cancer treatment. His owners chose to enroll him in a clinical trial assessing a minimally invasive method of eliminating a tumor's blood supply; additionally, this novel therapy involved delivering chemotherapy directly to the tumor. Once the blood supply to Zeke's tumor was mapped during the procedure, the tumor was accessed through minimally invasive fluoroscopic guidance (real time "X-rays"). Catheters placed into the femoral artery were guided by imaging to the tumor. Embolic beads were injected, causing a blockage of the vessels that directly fed the tumor, thereby cutting off its blood supply and accompanying nutrients. The goal of the procedure is to shrink the tumor, prevent further growth, and improve Zeke's comfort and quality of life. Additionally, the use of minimally invasive surgical and IR techniques is utilized for sentinel lymph node mapping and biopsy procedures, thermal ablation of cancer, the use of intraoperative near-infrared imaging, laparoscopic and thoracoscopic diagnostic and treatment options, and many other ways of improving animal health.

Top right: Zeke traveled from Colorado for a groundbreaking surgery as part of a clinical trial at UC Davis. Courtesy photo

Left: Dr. Marcellin-Little with Dexter, the recipient of a custom-fitted, 3D-printed titanium hip implant. Photo: Don Preisler



Collaborative Care

5 The biggest benefit to care at UC Davis is the collaborative nature of the hospital. Faculty from multiple specialties routinely work together on cases. Advancements in surgery, diagnostic imaging, oncology, critical care, and more are a direct result of this. It took a significant collaboration recently to save Davis, a 3-day-old Thoroughbred foal unable to stand. Initial tests showed evidence of sepsis in his joints and bones, a dangerous inflammatory reaction to a widespread infection. He was hospitalized for three weeks, receiving aggressive antibiotic and supportive therapies including a plasma transfusion, as well as arthroscopy and flushing of his infected joints. Long-term antibiotics were continued, and he had an excellent outcome. His care team included board-certified specialists and residents from the Equine Field, Internal Medicine, Medical Emergency, Critical Care, Neonatology, Diagnostic Imaging, Surgery, and Anesthesia Services, as well as support from the Transfusion Medicine Laboratory, Clinical Diagnostic Laboratory, Pharmacy, and dozens of technicians and students. This collaborative group worked tirelessly around the clock to bring Davis to health. Very few equine hospitals have the extensive team in place to handle all aspects of a case like this in-house. The level of equine care at UC Davis looks to scale even higher with the creation of the Equine Performance and Rehabilitation Center in the coming years.



Lady Laine is one of the first foals produced at UC Davis by a highly technical reproduction process only available at a few places in the world. Courtesy photo

Advancing Equine Reproduction

6 The UC Davis Veterinary Assisted Reproduction Laboratory is focused on understanding the complex nature of gamete physiology and embryo development in the horse and other animal species. One of the most exciting advancements by the laboratory is the development of an intracytoplasmic sperm injection (ICSI) program. The technology required for this type of equine reproduction is typically not available from veterinary practices. Unlike the normal process of in vitro fertilization (which generally does not work with horses), ICSI involves injecting a single sperm into an egg extracted from a mare. The embryo then develops in a laboratory for a week before being implanted in the mare. The process includes aspiration of immature or mature eggs using ultrasound guidance; in vitro culture of the eggs; micromanipulation and microinjection of eggs with a single selected sperm; and laboratory embryo culture, freezing, and transfer to synchronized recipient mares. Recently, Lady Laine was born thanks to ICSI technology, and she is thriving into a healthy filly.

Davis was hospitalized for three weeks in the Neonatal Intensive Care Unit just after birth. Courtesy photo



Suzy the sloth was treated in the expanded ER ICU. Courtesy photo

Expanding Emergency Care

7 Admittances to the UC Davis veterinary hospital's emergency room (ER) have more than doubled since immediately before the pandemic. Historically, the ER caseload has increased tenfold since 2013, seeing an average of more than 900 cases per month in 2022, with some months seeing more than 1,200 patients. To help meet demand, the hospital opened a new ER and intensive care unit (ICU) totaling approximately 1,600 square feet, nearly doubling its previous size. Funded entirely by donations, the new facility optimizes patient care and expands opportunities for students and emergency specialists. Recent patients to the new ER included a cat with renal failure after a toxic ingestion, a dog with intervertebral disc disease that ultimately needed neurosurgery, and a sloth named Suzy from the SeaQuest Aquarium who was not responding well to her diet, losing weight, and in poor overall health as a result. After several days of hospitalization, supportive care, and a new diet, Suzy recovered from her illness and regained muscle mass and body weight.

Dr. Amandine Lejeune teaches students and residents how to perform an electrochemotherapy treatment on a dog. Photo: Don Preisler



Breakthroughs in Cancer Treatments

8 Novel cancer treatment breakthroughs are continually being discovered thanks to new technologies and a robust clinical trials program. The recent acquisition of an electrochemotherapy device to treat tumors on or just under the skin is proving to be a valuable alternative method of care. The treatments involve administering chemotherapy drugs intravenously then sending electronic pulses into the tumor area. The electric current creates pores in the tumor's cells, allowing a higher percentage of the chemotherapy agent to enter the directed areas, killing the cells and preventing cell division. Other innovative cancer treatments involve immunotherapy—activating the body's natural killer cells to fight off the growth and spread of cancer. Several clinical trials are investigating the concept, including the use of interleukin-15, a protein inhaled by patients. Tyson, a 10-year-old pit bull terrier mix, saw tremendous results from the trial, which helped stimulate his immune system defenses against his cancer. Tyson is helping bring attention to the science of comparative oncology, which is creating a unique partnership between UC Davis Veterinary Medicine's Center for Companion Animal Health and UC Davis Health's Comprehensive Cancer Center, as the two research centers combine forces to fight cancer in both animals and people.



Laser therapy helped remove benign tumors on Pint's eyelids. Photo: Mike Bannasch

Advanced Ophthalmic Treatments

9 A cherished member of the UC Davis family was the first canine patient to benefit from new equipment in the Ophthalmology Service. Pint, the retired tee retriever at UC Davis football games, is predisposed to the growth of benign tumors on his eyelids. Thanks to a new diode laser, ophthalmologists removed Pint's tumors with an outpatient procedure, and he is recovering well. For most procedures, a dye is injected into the surgical site prior to use. This dye holds therapeutic properties that are activated by the laser in response to a specific wavelength. As in Pint's procedure, the surgery site cannot be closed with sutures, but the use of the laser is superior to an alternative cryoablation procedure by creating an immediate scab that protects the area from infection, and results in less post-surgical swelling. Most procedures can be accomplished with only sedation, and the technology can be used to treat cancer in and around the eye, as well as many other ocular diseases including glaucoma, iris cysts, distichiasis (growth of extra eyelashes), and laser retina reattachment. Its use in veterinary medicine is scarce, with few hospitals offering this technology.

Elite Level Cardiology Care

10 With decreased heart function, bulldog Snoopy was at risk of heart failure. He was previously diagnosed with a leading canine congenital defect—severe pulmonary valve stenosis. A balloon valvuloplasty procedure to correct the improper flow of blood out of his heart had failed (not unusual for his breed). An extremely rare alternative is stenting the valve, a procedure now performed at UC Davis. Less than 10 veterinary teaching hospitals perform this minimally invasive procedure that accesses the heart intravenously. Snoopy recovered well, and his heart is showing significant improvement. Another cutting-edge cardiac procedure just beginning at UC Davis, and rarely performed elsewhere, is an electrophysiology program, which allows cardiologists to electrically map the heart and identify the cause of arrhythmias (abnormal heartbeats which can cause sudden death). Prior to this equipment's arrival, clients needed to seek the procedure on the East Coast or pursue medical therapy alone, which is often not a long-term solution. Instead of trying to control the abnormal rhythms with medications, this procedure identifies the affected cells and scars them with an ablation treatment, eliminating their ability to fire abnormally.

Snoopy is no longer at risk of heart failure thanks to a cutting-edge cardiology treatment rarely performed in veterinary medicine. Courtesy photo



Center for Advanced Veterinary Surgery to Open

By Rob Warren



Dr. Amy Kapatkin (left) and Provost Mary Croughan join Dean Mark Stetter for a ribbon cutting ceremony. Photo: Mike Bannasch

When your dog is uncomfortable and needs an orthopedic surgery, the last thing you want to deal with is a significant wait time for an appointment. Unfortunately, due to an increase in pet ownership during the pandemic and a steady increase in caseload, the Small Animal Orthopedic Surgery Service has experienced a continual backlog of patients. To address this unprecedented growth and the need for more surgery space, the UC Davis veterinary hospital will open the Center for Advanced Veterinary Surgery (CAVS). Ideally situated just steps north of the veterinary hospital, CAVS encompasses 6,600 square feet of space including three large operating rooms. The center can accommodate a growing caseload associated with surgical treatment advances, as well as reduce the backlog of referred cases that cannot be accommodated in the hospital's existing surgical suites.

"As the nation's top-ranked veterinary school, we had a bold vision to create a state-of-the-art facility dedicated to providing life-changing surgical treatment for dogs, cats

and other beloved companion animals," said Dean Mark Stetter. "Our surgical specialists set the bar for innovative treatments, including total hip replacements with the ability to create custom, 3D-printed titanium implants if necessary. We are motivated to grow our capacity to lead a rapidly evolving field to even greater heights."

Completed entirely with donor funds, the center will be able to help more dogs like Sky, a 2-year-old female Siberian husky treated at UC Davis. Sky's right femur had dislocated from her hip joint, which showed chronic degenerative changes. Dr. Denis Marcellin-Little, one of the nation's foremost authorities on hip replacement surgeries, used a stem implant in Sky's femur that interacts with a cup implanted in her pelvis.

Performing Sky's hip replacement in the early stages of her degenerative disease prevented further complications later in life. UC Davis is one of few veterinary facilities in the world that can perform this critical procedure. CAVS will allow clinicians to bring exceptional care to more patients like Sky, while breaking new ground in surgical innovation.

When it opens in November, the center will provide the ability to treat more animals suffering from injuries or disorders of the bones and joints.

The Orthopedic Surgery Service's average caseload has increased at a rate of 15% per decade for the past 30 years. Currently, there is a four- to six-week wait time for orthopedic surgeries to address non-life-threatening conditions.

CAVS will provide orthopedic surgeons with even greater access to the most innovative technologies and surgical instruments to treat patients. It will accommodate advances in surgical instrumentation, anesthesia and monitoring equipment, and cross-sectional imaging equipment to support sophisticated procedures in small animals. The center will also enhance opportunities for the next generation of specialists through resident and fellowship training, amplifying UC Davis as the leading house officer program in the country.

"The Center for Advanced Veterinary Surgery is positioned to be a premier destination for orthopedic surgeons and pets in need of their specialized care," said Stetter. "Through CAVS, our world-renowned specialists will continue to expand the reach of exceptional surgical care and forge new paths to helping companion animals enjoy optimal health."

To learn more about the CAVS, please contact our Advancement team at 530-752-7024.

◀ *Sky underwent a hip replacement surgery, one of the procedures that will soon be done in the new surgery center. Photo: Brian Estill*





Honors and Awards

Boaz Arzi, DAVDC, DEVDC, DVM, was accepted as an affiliate member to the American Society of Temporomandibular Joint Surgeons, making him the first veterinarian accepted into the society. Membership requires significant surgical experience and an interest in performing research or clinical studies of orthopedic disease or dysfunction of the temporomandibular joint system. Arzi was also honored with the 2023 American Veterinary Medical Foundation/ EveryCat Health Foundation Research Award. Established in 2009, the award honors a candidate’s contribution to advancing feline health through their research.

Chris Brandt, DVM, received a Golden Sustained Impact Award at the 2023 UC Tech Conference by the UC Tech Awards Program. This award recognizes an individual who has contributed significant expertise, passion and commitment to UC over a sustained period of time, as evidenced by a portfolio of work supporting the technology arena. As Chief Information Officer at the School, Brandt has spearheaded the adoption of cutting-edge technologies that have revolutionized operational, teaching and learning experiences, as well as created innovative digital tools that have empowered students, faculty and staff.

Kate Hopper, Ph.D., DACVECC, was awarded the 2023 Zaslow Distinguished Service Award by the Veterinary Emergency and Critical Care Society (VECCS). This award recognizes an individual who has demonstrated exceptional commitment and dedication while making significant contributions to VECCS and the practice of veterinary emergency and critical care.

Barry Kipperman, DACAW, DACVIM, DVM, was honored with the Shomer Award for Veterinary Ethics by the Society for Veterinary Medical Ethics. This award recognizes leaders in the field of veterinary medical ethics who have made significant contributions through mentorship, scholarship, and advocacy. Kipperman is an instructor of veterinary ethics, as well as a prolific researcher and author focusing on the ethical dilemmas and moral stress experienced by veterinarians.

Christopher Lucchessi, Ph.D., and Stuart Meyers, DACT, DVM, Ph.D., have been honored with 2023 Academic Senate and Academic Federation awards. These are the campus’ most prestigious awards—recognizing exceptional research, teaching and mentoring, and public service. Lucchessi has made significant recent advancements in potential treatment for osteosarcoma. Meyers has shown outstanding commitment to his students, mentees, peers and community.

Philipp Mayhew, DACVS, received the 2023 Simon Award of The British Small Animal Veterinary Association, which recognizes his outstanding contributions to the advancement of small animal surgery. As a veterinary surgeon experienced in soft tissue surgery of dogs and cats, Mayhew has pioneered minimally invasive surgical techniques to specific differences in canine and feline anatomy and physiology. He has also developed novel techniques that avoid the need for open abdominal or thoracic surgery.

Jonna Mazet, DVM, MPVM, Ph.D., was awarded the K. F. Meyer/ James H. Steele Gold-Headed Cane by the American Veterinary Epidemiology Society. Dating to 1964, this award recognizes career accomplishments and contributions to veterinary epidemiology, public health, and One Health. Recognized as a global leader in One Health Initiatives, Mazet serves as the Vice Provost of Global Challenges, helped found the UC Davis One Health Institute, and remains active in international One Health education, service, and research.

Stuart Meyers, DACT, DVM, Ph.D., received the annual David E. Bartlett Lifetime Achievement Award from the Society for Theriogenology. The award serves to recognize an outstanding individual who has made significant contributions to the discipline, which encompasses all aspects of veterinary reproductive medicine and surgery. Throughout his career, Meyers has also provided exceptional teaching, leadership, and research mentorship.

Catherine Outerbridge, DACVD, DACVIM, DVM, was honored with the Kral Award by the American Academy of Veterinary Dermatology. This award is bestowed to individuals who have demonstrated an outstanding career in veterinary medicine and the veterinary dermatology specialty, produced major published works, and contributed to veterinary organizations. She is double board certified in internal medicine and dermatology and has mentored more than 20 residents throughout her career.

Celebrating 75 Years!

The UC Davis School of Veterinary Medicine kicked off its 75th anniversary over the course of a beautiful spring weekend with a host of celebrations and activities. Friday began with a luncheon for key donors and guests—including Dr. George Puterbaugh from the inaugural Class of 1952. Gunrock and the triathlete pup, Cori, were on hand to greet guests as they arrived.

Dean Mark Stetter presented Valerie and Larry Casey with the El Blanco Award—one of the school’s highest honors that animal owners and other benefactors have made to advance animal health and well-being.

Dr. Crystal Rogers served as master of ceremonies while the luncheon continued with a panel discussion on recent scientific discoveries and the future direction of veterinary medicine. Guests then had the opportunity to visit the veterinary medicine campus and listen to presentations on curing cancer in dogs and humans, saving shelter animal lives and helping animals during disasters. Saturday afternoon concluded with tours of the Advanced Veterinary Surgery Center and the Gourley Clinical Teaching Center.

That evening, our greater veterinary community gathered with alumni for a BBQ accompanied by live music from a band that included faculty members Brian Leonard and Scott Katzman. Dean Mark Stetter thanked everyone for joining in the celebrations and highlighted Mieko Temple from the Class of 2025 for her winning 75th anniversary poster design.

Saturday morning kicked off with the annual Oscar W. Schalm Lectureship, established in 1988. Dr. Ivan Schwab, professor emeritus of ophthalmology, presented a lecture on “Sensory Diversity and the Eye,” describing how some animals use alternate sensory mechanisms combined with visual pathways, as well as the evolution of these animals.

The Class of 1973 then enjoyed a 50th reunion brunch (along with other class years) followed by student-led tours of the teaching and clinical facilities.



*Dr. George Puterbaugh, from the inaugural Class of 1952, with his wife Sharon.
Photo: Trina Wood*

On Saturday evening, alumni gathered for a celebration dinner—that began with a standing ovation for Puterbaugh—and the presentation of the Alumni Achievement Awards to Dr. Roxann Brooks Motroni, Ph.D. ’12, DVM ’13; Dr. Kimberly Dodd, Ph.D. ’14, DVM ’15; Dr. Jeffrey Boehm, DVM ’90; Dr. Laurel Gershwin, DVM ’71, Ph.D. ’79; and Dr. Christopher Murphy, DVM, Ph.D. ’84.

The school’s position as a national leader in veterinary medicine is made possible by the ingenuity and dedication of individuals who built the school’s foundation and continue to advance veterinary medicine today. Their commitment to a world-class institution continues to be reflected in our research facilities, classrooms, clinics and beyond—making a difference for animals, people and our planet.



Dean Mark Stetter discusses current topics in the School of Veterinary Medicine with surprise (two- and four-legged) guests in this monthly video series.

Don’t miss an episode.



In Memoriam

*Arthur Bickford, M.S. ’64, Ph.D. ’66
Joanne McCallum, DVM ’95, MPVM ’00*



Drs. Terrence Ferguson (right) and Vernard Hodges of the *Critter Fixers* show served as guest speakers for the 2023 Commencement ceremony. Courtesy Pro Pics

Commencement 2023

Congratulations to the Class of 2023 who received their degrees in the school’s 73rd Commencement Ceremony held at the Mondavi Center on May 26th. Among those graduating were 144 DVM students, 23 residents and 15 students in the Master of Preventive Veterinary Medicine program.

Drs. Terrence Ferguson and Vernard Hodges, hosts of the popular *Critter Fixers* series on Disney+ and Nat Geo WILD, served as guest speakers. They shared their journey from growing up in rural Georgia to veterinary school at Tuskegee University to celebrity veterinarians with a worldwide following. They credit their success with the supportive team of people they have chosen in their lives and pouring from full cups.

“We see giving back and pouring into others as our responsibility, and we are happy to do it,” Ferguson said. “We have an incredible team of people who work to lift us up, and that’s the only way we can do what we do. Investing in other people not only helps them, it helps you too.”

They closed their remarks with the following charge to the new graduates:

Do good works.

Practice good medicine.

Never stop learning.

Help as many people as you can.

Enjoy the journey!

Jenn Cossaboon, Chase Garcia, Erin Hisey and Aryana Razmara received prestigious National Institutes of Health (NIH) F30/F31 awards. As participants of the Veterinary Scientist Training Program, these students are pursuing dual DVM and Ph.D. degrees with the goal of becoming clinician scientists. These NIH multi-year fellowships are crucial to achieving that goal by providing students with financial support and training to incorporate research and clinical skills in their future careers.



The **UC Davis Center for Equine Health’s** *Horse Report* publication was awarded a national Council for Advancement and Support of Education 2023 Circle of Excellence award, receiving a silver award in the University General Interest/Targeted Audience Magazines category. Winners were recognized for overall quality, innovation, use of resources and the impact on the institution or its communities. The judges commended the *Horse Report* for its “excellent representation of the target audience, capturing their interests and preferences effectively” as well as for “creating an aesthetically pleasing and visually engaging experience.” Congratulations to editor Amy Young and designer Steve Dana!



Endowed Chair to Improve Access to Care



DVM student volunteers at the Knights Landing One Health Clinic examine a patient. Photo: Don Preisler

PetSmart Charities will support a \$6 million endowed chair at the veterinary school, marking the largest gift to date made by the nation’s top funder of animal welfare to bolster access to veterinary care.

The new PetSmart Charities Endowed Chair in Accessible Veterinary Care will leverage UC Davis’ breadth of research strengths to continue to build innovative, compassionate care for all pets, ensure hands-on clinical training for veterinary students, and develop research models that can scale nationwide. UC Davis has delivered innovative, low-cost veterinary care to underserved rural and urban communities for years through the Knights Landing One Health Clinic, the Mercer Clinics in Sacramento and Davis, and Covelo Clinic in Mendocino County.

UC Davis’ School of Veterinary Medicine was chosen to receive the gift for its sustained priority of improving access to veterinary care and integrated approach to student training. Our experience in serving communities in need and commitment to attracting a more diverse population of students to the field also made for an ideal match in supporting PetSmart Charities’ initiatives. The school is in the process of filling the chair through a national hiring process.

“I’m thrilled to join forces with PetSmart Charities to make a greater impact on an issue that affects many animals and their owners,” said Dean Mark Stetter. “Together, I believe that we can advance new models that can expand veterinary care to those who need it most.”

Dr. John Pascoe Leaves a Legacy

After 40 years of service to the school, Executive Associate Dean John Pascoe celebrated his retirement this year. He joined the faculty in 1983 and served as professor of surgery, chair of the Department of Surgery and Radiological Sciences, and chief of the Equine Surgery Service. He is also a diplomate of the American College of Veterinary Surgeons.

Pascoe served as associate dean for academic programs prior to becoming executive associate dean—a post that gave him broad responsibility for academic leadership, academic and facilities planning, and academic personnel administration, along with development and stewardship of the school’s resources, programs and infrastructure.

Throughout his career, Pascoe has served as a mentor, inspiring students and early-career professionals to aim high, in ways that would impact the profession and benefit the world. He also ensured that art appears prominently across the school to balance the rigors of the sciences with the beauty of life itself.

Congratulations, Dr. Pascoe! We wish you many happy adventures in the outdoors as you enjoy a well-reserved retirement. You will be missed, but your legacy will continue to impact the profession for years to come.



Photo: Don Preisler



Silke Hoffmann

Class of 2024

By **Amy Young**

“You **form your dreams** when you are a child. **If you dream of becoming an equine veterinarian,** you are more likely to **become one.**”

— **Silke Hoffmann**



In photo to the right, Silke Hoffmann bandages a horse's leg under the supervision of Dr. Julie Dechant during her clinic rotation with the Equine Surgical Emergency and Critical Care Service. She adopted Kylo (pictured above) during her first year of veterinary school. Courtesy photo

Silke Hoffmann spent a lot of time in Germany as a child and was enamored with a bay horse that lived in a field behind her grandmother's house. As all horse-crazy girls do, she eventually convinced her parents to let her take riding lessons. Being on the back of a horse helped plant the idea of becoming a veterinarian.

When Hoffmann later attended Cal Poly Pomona as an undergrad, she joined the school's Intercollegiate Horse Shows Association team and worked as a veterinary technician for an equine veterinarian. For Hoffmann, that job was the key to knowing she was on the right path.

“It's a service industry that really helps people,” Hoffmann said. “I enjoyed the science and the critical thinking. The pieces all made sense to me. I have never doubted my choice.”

She also credits the experience with teaching her about the realities of the job, from the challenge of late nights to the satisfaction of making a difference in people's lives.

Hoffmann did not have pets growing up, so prior to her experience as a veterinary technician she had never visited a veterinary clinic.

“It's really hard to not have that classic ‘horse girl’ experience,” she said. “It still makes me a little insecure. What has really helped is having mentors who believed in me.”

Her advice for others in similar positions is to find good mentors and a community to lean on.

“Try it and see if you like it,” she advised. “You have to be brave. Don't be afraid to struggle in the beginning. It will only make you a stronger veterinarian, and a stronger person, in the end.”

Although she is the only one in her equine track cohort that identifies as Asian American Pacific Islander, Hoffmann says they all come from different backgrounds and have become very close as a group. She fosters these relationships through her many service roles: co-president of the Equine Medicine and Equine Theriogenology Clubs, a vice-president for the Class of 2024, and a School of Veterinary Medicine Student Ambassador.

In her free time, Hoffmann loves to read and is an avid fan of science fiction. She adopted a German shepherd from a shelter during her first year in vet school, naming him Kylo (after Kylo Ren in Star Wars). Other hobbies include watching Netflix and hanging out with friends.

Hoffmann is planning to pursue a rotating equine internship after graduation, followed by an equine theriogenology or internal medicine residency. Ultimately, she wants to work at a multi-doctor practice—ideally one that prioritizes work-life balance for their employees—doing emergency critical care work or theriogenology. She cites supporting fellow veterinarians and making salaries more competitive as ways to ensure that practitioners remain in equine medicine.

She is passionate about the need to expand opportunities for children of different backgrounds as a key to motivating future students to become equine veterinarians.

“You form your dreams when you are a child,” said Hoffmann. “If you dream of becoming an equine veterinarian, you are more likely to become one.”

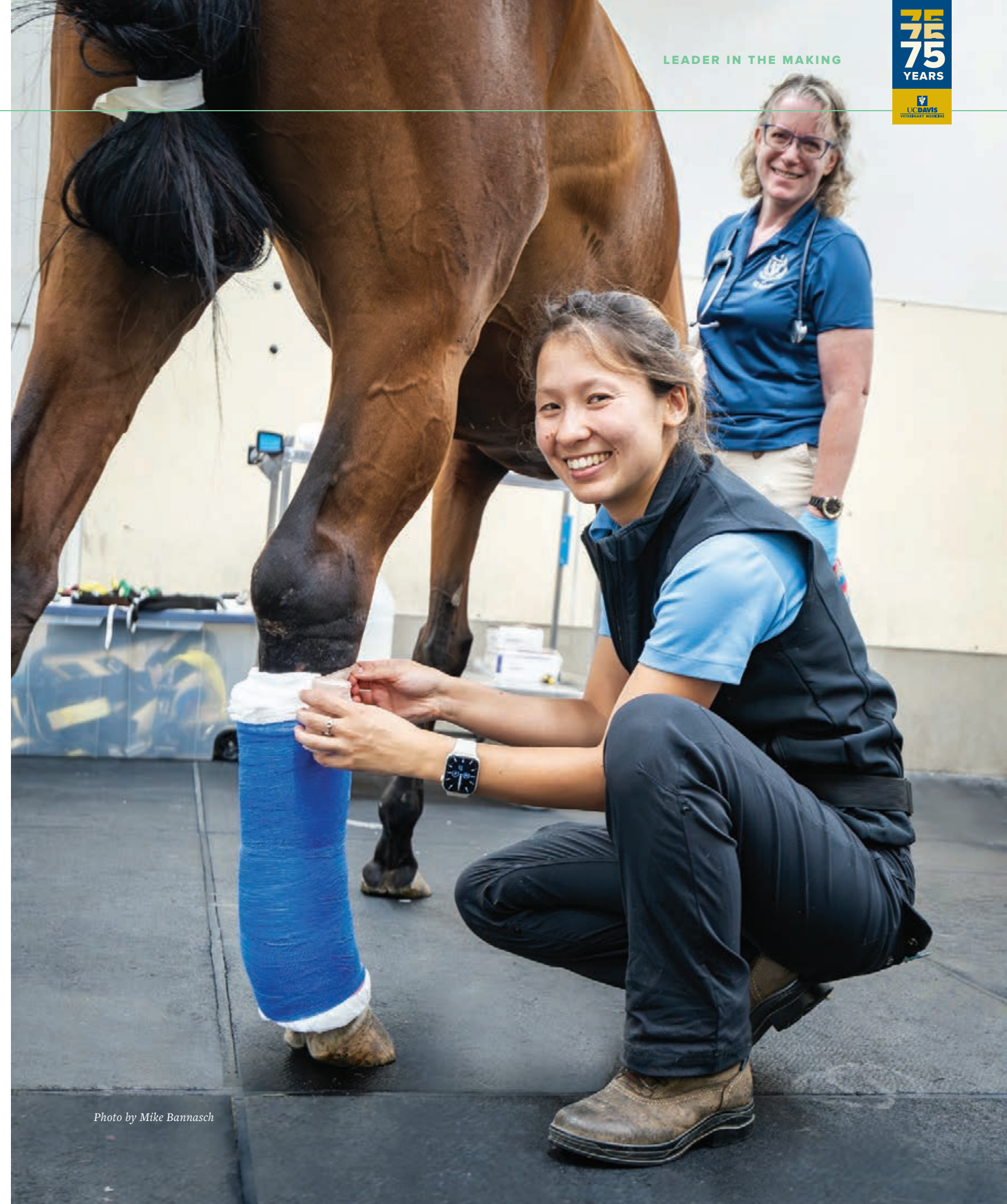


Photo by Mike Bannasch

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– Isabel Vaishampayan

Class of 2025

Student American Veterinary Medical Association President

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Class of 2025 Legislative Liaison

Student Ambassador

Scholarships invest in the world's brightest veterinary students like Isabel, who will lead the way in caring for animals, people and the environment.

Please consider supporting scholarships by making a gift today at give.ucdavis.edu/Go/23DVM.



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