



Newly minted DVM, Dr. Sabrina Wu, with her family following commencement. For more on commencement, see page 2



## SHELTER MEDICINE Inspires New DVM

When Dr. Sabrina Wu was a baby, one of her first words was ‘cat’—which is a little weird because she didn’t have any pets growing up in Southern California. But that didn’t stop her fascination with all things related to animals.

“I would pore through encyclopedias on birds, cats, horses, looking at pictures, memorizing scientific names, reading about how to take care of them,” said Wu, who recently graduated with the Class of 2019. “My parents were so confused. They didn’t know how to read those as bedtime stories so they just looked at the pictures with me. They thought it was something I would outgrow.”

In 6th grade, without telling her mom first, Wu arranged to volunteer at the local animal shelter in Pasadena as part of a class project. She was only 11 and needed to be 13 to volunteer, but after hanging around to socialize, pet the cats and being annoying enough, the shelter staff relented. Her parents figured the poop clean up and exposure to euthanasia would cure Wu, but it only intensified her desire to help animals.

**“I would pore through encyclopedias on birds, cats, horses, looking at pictures, memorizing scientific names, reading about how to take care of them.”**

— Sabrina Wu

# Commencement 2019

Congratulations to the Class of 2019! They graduated on May 24th in the school's 68th Commencement Ceremony. Among the graduates were 138 DVM students, 30 residents and 13 students in the Master of Preventive Veterinary Medicine program. Pictured from left are: Denver Coleman, Jennifer Lee and Danielle Pepping.

Dr. Munashe Chigerwe, the student-selected faculty speaker, offered these wishes for the graduates at the end of his speech.

"I wish you the strength of a rhino, that you stand tall as a giraffe. I wish you brains the speed of a cheetah and I wish you find your way like an elephant matriarch. As you leave this place to make a living, please don't forget to live your life."

Dr. Joie Watson presented Jennifer Chan with the school medal, the highest honor for a graduating DVM student in recognition of outstanding academic and clinical performance. Student speaker, David Garcia, kept the laughs coming along with sincere gratitude for the teachers and mentors who demonstrated the art of veterinary medicine and set great examples for him and his classmates to emulate.

Dean Michael Lairmore urged graduates to reflect on their time at UC Davis and cherish the memories.

"You've inspired us and each other. You've deepened the school's legacy," Lairmore said. "As Stephen Covey says, live life by a compass, not a clock."



Dean Michael Lairmore (center) presented the 2019 Alumni Achievement Awards during commencement to (l to r) Drs. Stephanie Valberg, Elizabeth Sabin, S. Wayne Martin, Greg Cutler and Michael Kent. This award is the highest honor bestowed by the school for personal and professional contributions to veterinary science, veterinary practice and the advancement of human welfare.

## FALL FESTIVAL/ALUMNI REUNION WEEKEND

We look forward to seeing many familiar faces October 25-27 at our Fall Festival Alumni Reunion weekend for the classes of 1959, 1969, 1979, 1989, 1999 and 2009. We hope you can join us to reconnect with classmates and faculty, meet current students and see how the school has grown. For information, call 530-752-7024 or visit [www.vetmed.ucdavis.edu/alumni/2019-Fall-Festival](http://www.vetmed.ucdavis.edu/alumni/2019-Fall-Festival).





## Dr. Sabrina Wu continued from page 1

"That's where I first met a real working veterinarian," Wu said. "I was in awe and realized that's what I wanted to do."

While obtaining her undergraduate degrees in molecular and environmental biology with a minor in forestry at UC Berkeley, Wu worked at a few small animal clinics as a vet assistant to keep building experience. She also worked as a teaching assistant at the Lawrence Hall of Science discovery room.

"Seeing how excited kids get at touching a snake for the first time—I loved that," she said.

Although Wu knew her career path would lead to veterinary school, she didn't apply immediately. Instead, she took a year after her undergrad training to work full-time in a veterinary clinic in Boulder, Colorado—a great location given her love of the outdoors.

"That was honestly the best decision to remove myself from the pressure cooker of anxiety and competition to let myself really focus on the application process," Wu said.

A year later, Wu joined the Class of 2019 at her first-choice school, UC Davis, where she focused on shelter medicine and general practice. She threw herself into a number of student clubs and volunteered at the [Mercer Clinic for Pets of the Homeless](#) as well as the [Knight's Landing One Health Clinic](#).

Wu's compassion and dedication to working with underserved populations and shelters led to several scholarships, including the Dr. Patricia Gilbert, RS Robertson, and Doris Day and Terry Melcher scholarships.

"It was overwhelming emotionally to receive those particular scholarships—and they were very generous ones," Wu said. "It made me realize that this work is such an important part of my life and gave me the encouragement to keep going."

Of course, volunteering with clubs such as the [Orphan Kitten Project](#) does come with the risk of bringing home kittens that never leave. Wu kept her limit to four cats—one for every year of vet school.

One Christmas, Wu said she wasn't going home without the cats, so her parents agreed she should just bring them and they would have to stay in her room. Within 24 hours, the cats had free range of the house and Wu caught her mom cooing to them, asking if they wanted to join her for breakfast.

"I'd come back in the evening and the cats would be curled on their laps watching television," Wu said. "They send them gifts all the time now; it makes my heart melt."

Just as she did following her undergraduate studies, Wu is taking her time to choose her next steps. She plans to spend the summer visiting national parks and getting some breathing room before applying for jobs at non-profits or shelters in underserved communities.

Outside of veterinary medicine and outdoor recreation, Wu's greatest passions are reading and cooking. Her ultimate dream is to own a shelter and run a *catfe*/bookstore.

"What drew me to this field wasn't just the medicine, but the ability to help animals and the people attached to these animals," Wu said. "At some point, I think I would really enjoy stepping back from hands-on medicine 24/7 into management and education."

## KOKO'S LEGACY Continues

Dr. Sabrina Wu's first clinical rotation during her fourth year was pathology. That's when she got to meet one of her childhood idols—Koko, the western lowland gorilla, famous for her ability to communicate through sign language and her affinity for kittens. Koko died in her sleep last year at age 46 and was brought to the UC Davis School of Veterinary Medicine for a complete necropsy to confirm cause of death and allow researchers to continue to learn about great ape health.

"I got my wish to meet her, not in the way I wanted, but it was still special," Wu said.

Associate Professor Kevin Keel led the team that day and said it was a privilege to be able to evaluate Koko and for our students to experience and learn from her. "She contributes to the body of knowledge we have about geriatric great apes, and that can help in the long-term management and care of these animals. She also continues to teach us more about the basics of language and the comparative neuroanatomy between gorillas, other great apes and humans."



Koko and one of her kittens, Ms. Gray  
(The Gorilla Foundation)



## GIVING BACK and Looking to the Future

**D**r. John Zimmerman, DVM '62 can't thank the School of Veterinary Medicine enough for giving him the training to pursue a fulfilling career. After graduation, he worked in dairy production and equine medicine for two years in Los Angeles before establishing the [Sonoma Marin Veterinary Service](#) in Petaluma, where he has been practicing for 57 years.

"Veterinary medicine has been a great fit for me," he said. "I like cattle and ended up coming back to my home town. It's given me a wonderful life."

Zimmerman grew up on a small dairy farm and has fond memories of helping his family work the farm, learning a strong work ethic and caring for cows. As a kid, he joined the Petaluma Future Farmers of America and judged animals while an undergrad at UC Davis. He knew back then that he wanted to work with cattle and attend veterinary school here.

Looking back, Zimmerman feels that his career has taken him beyond his expectations when he was a veterinary student. In addition to his practice, Zimmerman served on the California Veterinary Medical Association Agriculture Committee for 25 years and on the California Department of Food and Agriculture Cattle Disease Task Force for 12 years.

Looking forward, Zimmerman feels it's important to invest in future veterinarians as they impact the quality of care he and his team provide to equine and livestock in Sonoma and Marin counties. When it comes to hiring veterinarians, he looks first to UC Davis graduates who have proven to be well-trained and top-notch.

Zimmerman has been a loyal supporter of the school since the 1980s and most recently pledged a gift to support the Livestock and Field Services Center, a major component envisioned as part of the [UC Davis Veterinary Medical Center](#) **(see rendering to the right.)** In recognition, a naming opportunity honors his remarkable career through the John E. Zimmerman, DVM, Sonoma Marin Veterinary Service open workstation—where faculty, residents, staff and students will work together while providing excellent care.

"I'm proud to be a graduate of the UC Davis School of Veterinary Medicine and grateful for the tremendous impact it has had on my career and life," Zimmerman added. "When it's time to give back, you give back to those who mattered most."

If you would like to recognize someone special through a naming opportunity at the UC Davis Veterinary Medical Center, please contact us at 530-752-7024 or visit [www.vetmed.ucdavis.edu/giving/vmc](http://www.vetmed.ucdavis.edu/giving/vmc) for more information.



# FORMER RACEHORSE Finds New Life

Former California racehorse Ourwestcoastghost, an 11-year-old Thoroughbred gelding, was recently admitted to the veterinary hospital following a turnout accident that caused multiple abrasions and lacerations to his front left limb. Due to concern that the injury was near the fetlock joint and/or the tendon sheath, the owners elected to bring Ourwestcoastghost to the school's equine medicine specialists.

Injuries in the fetlock—essentially a horse's ankle—present important teaching cases for veterinary students. The fetlock is subject to a great degree of physical stress when a horse is exercising, and can be easily compromised. Lameness in the fetlock is common, and a condition that equine specialists will diagnose many times in their career.

Clinicians and students noted a laceration across Ourwestcoastghost's fetlock with only a superficial abrasion up the leg. Joint fluid was collected from the fetlock and testing revealed mild inflammation but no infection. Physical inspection of the tendon and its protective sheath showed no damage from the laceration. Ourwestcoastghost escaped serious injury, but was hospitalized briefly for observation.

Ourwestcoastghost was quite the racer in his day, finishing "in the money" in 12 of his 25 career starts, winning six races. He is now a herdmember at [CANTER California](#) (the Communication Alliance to Network Thoroughbred Ex-Racehorses), which has a close connection to the school and has been a client for many years.

CANTER accepts owner-donated and surrendered off-the-track Thoroughbred racehorses. With the guidance of veterinary teams, CANTER rehabilitates injured horses and retrains them for second careers as sporthorses or pleasure mounts.



Recent DVM graduate, Dr. Hayley Dieckmann, tends to Ourwestcoastghost's wounds.



Ourwestcoastghost resting comfortably in the Large Animal Clinic barn.

## Leading the Way in **LIVESTOCK CARE**

One of the planned patient care services of the UC Davis Veterinary Medical Center is the Livestock and Field Service Center. An artist's rendering (right) illustrates a cut-away view of the facility. Designed in consultation with Temple Grandin, Ph.D., renowned for her groundbreaking work in engineering humane animal facilities, the new center will create a state-of-the-art environment for livestock handling, care and clinical teaching. To learn more, visit [www.vetmed.ucdavis.edu/giving/vmc](http://www.vetmed.ucdavis.edu/giving/vmc) or call us at 530-752-7024.



Dr. Denis Marcellin-Little with  
Dexter a few weeks after surgery. ▶

## DEXTER Gets a New Hip

When Anna and Ken Zankel adopted Dexter, a German shorthaired pointer, he was recovering from hip surgery after a likely run in with a car. It was clear he would need further medical intervention, but as lifelong animal advocates, the Zankels were dedicated to seeing him through a long journey back to health.

They met with Dr. Denis Marcellin-Little, one of the nation's foremost authorities on hip replacement surgeries on the faculty at UC Davis.

"Dr. Marcellin-Little was incredible," Anna said. "When he entered the picture, we immediately thought Dexter's care was at an entirely new level."



Dean Michael Lairmore (far left) presented Anna and Ken Zankel (center right) with the **2019 El Blanco Award** in May. The award recognizes significant contributions that animal owners and other benefactors have made to clinical veterinary medicine. As loyal clients of the veterinary hospital, the Zankels have established a fund to provide financial assistance for homeless senior dogs with critical medical problems who are treated at the hospital, giving them a second chance at life and finding a loving home. They also generously supported the renovation of a ward and donated funds to acquire specialized equipment for the [Small Animal Orthopedic Surgery Service](#). Several members from the service (pictured from the right)— Karen Haflinger-Moody, Theresa Varland and Michele Ortiz—joined in honoring the Zankels.

Due to all of Dexter's previous complications, Marcellin-Little was not optimistic about the best potential outcome. Dexter had already undergone a femoral head ostectomy that yielded suboptimal results.

"Beyond Dexter's previous surgical issues, he also had an infection in the bone," Marcellin-Little said. "That could present potential complications with a future surgery."

His solution was a total hip replacement using a custom, 3D-printed titanium implant coated with silver to prevent bacteria from growing and stave off any potential infections. The silver stays in the body for about six weeks and naturally prevents bacteria from nesting in the implant before the bone can grow into it.

Using exact measurements of Dexter's anatomy from a CT scan, a biomedical company that manufactures state-of-the-art veterinary orthopedic implants started crafting his new hip. In the meantime, the surgery team 3D printed exact replicas of Dexter's bones and practiced the procedure in order to best prepare for surgery.

During surgery, Marcellin-Little placed antibiotics directly into the wound because of Dexter's previous issues with infection. Another aspect to the surgery was the reattachment and reconstruction of the muscles in Dexter's hip joint.

Dexter's immediate recovery was not ideal. His hip prosthesis dislocated just a few days after the initial surgery, and the hip had to be revised. He responded well to the second surgery, but his long recovery resulted in muscle atrophy. With the help of his dedicated care team, Dexter exercised regularly. His limb use improved and he steadily showed decreasing signs of pain in his hip.

Dexter remained hospitalized for nearly two months. During that time, the Zankels traveled from San Francisco two to three times a week to visit and bring his favorite chicken treats. Now, nearly six months post-surgery, his recovery continues to go well.

"He's finally out of pain and can play," Anna said. "He's like a puppy again."





## CALF-SIDE DIAGNOSTICS? There's an App for That!

**B**ovine respiratory disease (BRD) is one of the most significant illnesses impacting the health of pre-weaned calves. It's the #2 killer of pre-weaned calves and of particular interest to dairy farmers in California, the nation's #1 milk producer.

Thankfully, producers now have a new diagnostic tool in hand—a phone app that leads them through a scoring system for BRD. Producers can view and select photos of clinical signs in the app if they are normal or abnormal. The app tallies the scores and creates a report that can also be shared with the herd veterinarian.

“The strength of this app is not in the simple scoring of one calf,” said Dr. Sharif Aly, professor of epidemiology and biostatistics with the school's [Veterinary Medicine Teaching and Research Center](#) in Tulare. “Using a random survey sample, the app can estimate a calf herd's BRD prevalence. Given inputs such as the number of calves and the desired accuracy of the prevalence estimate, the app guides the producer through the appropriate sample of calves to score. We have a lot of large herds in California and it would take hours to walk through and score them all.”

Developed by a research team from the [School of Veterinary Medicine](#), the [Department of Animal Science](#) and [UC Agriculture and Natural Resources \(UCANR\)](#), the free app is available for Android and Apple users. It is available in Spanish and Arabic with more languages coming soon.

Aly explained that the app is designed to be used in conjunction with a recently developed risk assessment tool that investigates the factors known to be associated with BRD in calves. Similar to the stroke risk score for humans, the tool is herd-specific and can help producers know their calves' risk and the management changes needed to control BRD on their farm.

The patent-pending risk assessment is the culmination of six

years' work and two key research studies published in the *Journal of Dairy Science* that evaluated risk factors for BRD and regional management practices in California dairies. One of the studies scored 4,000 pre-weaned calves across 104 dairies throughout the state. Another study scored 12,000 calves from birth to weaning on six dairies. The studies were supported by UCANR and USDA grants distributed through the school's Center for Food Animal Health for a total of \$640,000.

“We sought from the beginning to find out how management practices impact calf health and designed studies to give us the magnitude of association of these factors and occurrence of BRD,” said Aly, who served as the principal investigator for the collaborative studies involving researchers and extension specialists with the School of Veterinary Medicine, UCANR, UC Davis Department of Animal Science and the [California Department of Food and Agriculture](#).

The risk assessment tool will soon be available online and Aly said they hope to incorporate it into the BRD app. Once a producer completes the risk assessment, they can then use the app to benchmark their herd's BRD prevalence. After implementing the recommended management changes, owners can obtain a second prevalence estimate to compare their progress in BRD control.

“Used together, they can be an effective approach to lower BRD prevalence and improve the health of pre-weaned calves on California dairies,” Aly said.

◀ Dr. Sharif Aly with calves at a California dairy.



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The school provides lifelong learning through more than 20 annual offerings in the Veterinary Continuing Education program.

**For a complete listing of events, visit:** <https://ce.vetmed.ucdavis.edu/>.

### **12<sup>th</sup> Annual Back to School RVT/Vet Tech CE Seminar**

July 20-21, UC Davis

### **SoCal Vet Series: Diagnostics and Management of Canine and Feline GI Disorders**

October 4-6, Long Beach

### **Fall Festival: A CE Event**

October 27, UC Davis

### **Alumni Reunion Weekend**

October 25-27

### **6<sup>th</sup> Annual One Health Symposium**

November 2, Education Building,  
UC Davis School of Medicine  
Sacramento campus

## Veterinary Center for **CLINICAL TRIALS**

The Veterinary Center for Clinical Trials is dedicated to accelerating the identification and development of diagnostics and therapeutics for the benefit of veterinary and human patients. There are more than 50 ongoing veterinary clinical trials in different specialties and species, including:

- Diarrhea in dogs
- Bladder stones in dogs
- Liver tumors in dogs
- Anemia associated with chronic kidney disease in cats
- Pituitary tumors in cats
- Bilateral corneal stromal loss in Friesian horses
- Tendon and ligament injuries in horses

Our new URL is <https://clinicaltrials.vetmed.ucdavis.edu/>



## **EVENING OF GRATITUDE**—celebrating donors and future veterinary leaders

In April, the school celebrated the impact of scholarships and fellowships at its annual Evening of Gratitude, a special occasion that brings together donors and student award recipients. Students received approximately \$7 million in support this year, thanks to the generosity of donors like Dr. Michael Floyd, DVM '61 (center front) and other



individual, association and corporate donors. Floyd is surrounded by more than 60 student award recipients of the Floyd Tuition Support Fund and the Whitney (Dr. Joy) Engler Memorial Financial Assistance Fund. The school is a leader in providing scholarships and fellowships, helping to reduce the financial burden on the next generation of veterinarians.



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