

HEARTBEAT

UC DAVIS VETERINARY HOSPITAL

APRIL 2017

Special Edition



UCDAVIS
VETERINARY MEDICINE

Message from the Chief Veterinary Medical Officer

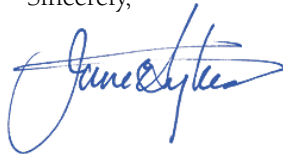
We hope you enjoy this special edition of “Heartbeat.” It is our goal to introduce you to a different specialty veterinary service in each edition, offer a glimpse into the workings behind the scenes, and introduce you to some of our veterinary team and special friends who have stories to share about their experiences at our veterinary hospital.

This is an exciting time for our hospital—we lead the world in veterinary medicine, and we have developed the vision that will keep us on the forefront of the field. Our plans include the new Veterinary Medical Center that is now closer to becoming a reality. Serving the 50,000 patients we treat each year has become a challenge in our existing space, and our caseload continues to grow. Our veterinary clinicians are eager to adopt the latest diagnostic and treatment options for our patients to provide the best possible care and outcome. At the heart of our new center will be the patient and client experience.

In this issue of *Heartbeat*, we will introduce you to our Emergency and Critical Care Services for both small and large animals. While we hope you never need to use these services, we want you to know what is available to you at a moment's notice—our dedicated team of clinicians, staff and veterinary students is on duty 24 hours a day, seven days a week.

Thank you for entrusting your animal's wellness with our caring team of veterinarians, staff and students.

Sincerely,



Dr. Jane Sykes, BVSc (Hons), PhD, DACVIM
Chief Veterinary Medical Officer

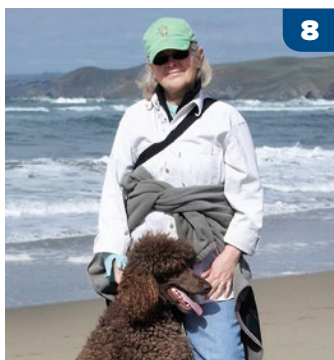
Dr. Jane Sykes,
BVSc (Hons), PhD,
DACVIM



On the front cover

Greetings! I'm pleased to introduce you to one of my feline friends. Pictured on the front cover is Buddy Blue, a champion British Shorthair kitten. His devoted owner is Kathleen Lawton, who is passionate about cats because of their beauty and endearing qualities. British Shorthairs are the love of her life. As a client of our veterinary hospital, Kathleen appreciates the excellent care her cats receive here, helping them to enjoy healthy and long lives. To read more about Kathleen and her enduring love for cats, see page 9.

Pint 



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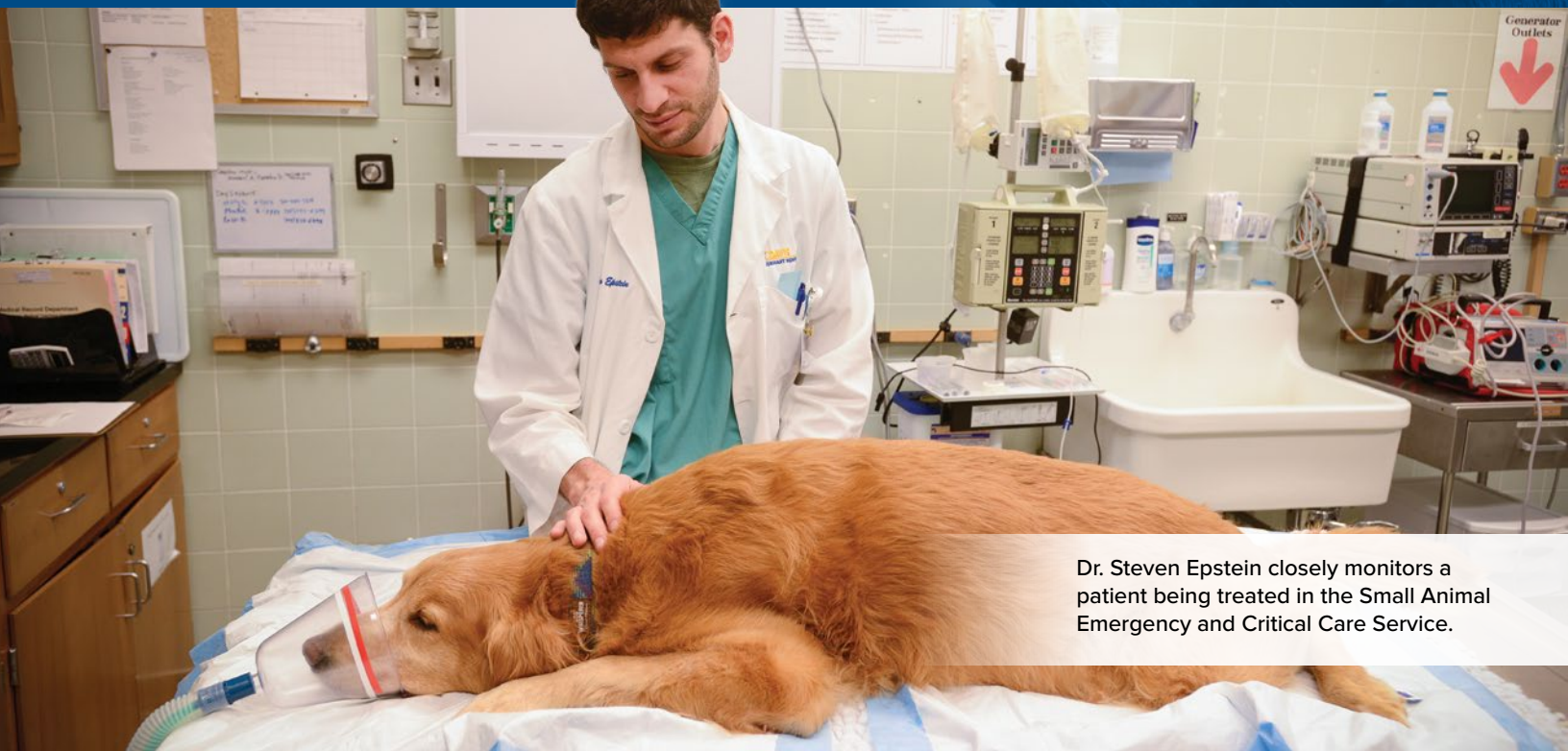
UC DAVIS
VETERINARY MEDICINE

UC Davis School of Veterinary Medicine Ranked #1 in the World

The special edition of *Heartbeat* is published by the School of Veterinary Medicine at the University of California, Davis: Dr. Michael D. Lairmore, dean, Hyemi Sevensen, interim assistant dean of advancement, Dr. Jane E. Sykes, chief veterinary medical officer, Veterinary Hospital, Dr. Kate Hopper, director, Small Animal Clinic, Dr. David Wilson, director, Veterinary Medical Center facilities planning, Celeste Borelli, Hnouzong Her, Don Preisler, Carolyn Sawai, Robert Warren, Trina Wood, Linda Ybarra. Cover photo courtesy of Kathleen Lawton.

24/7 emergency care

EMERGENCY AND CRITICAL CARE SERVICES ALWAYS THERE FOR CRITICALLY ILL AND INJURED PATIENTS



Dr. Steven Epstein closely monitors a patient being treated in the Small Animal Emergency and Critical Care Service.

The Emergency and Critical Care Services at the UC Davis veterinary hospital are open 24 hours a day, every day of the year to treat large and small animals with serious or life-threatening problems that require immediate attention. Equipped to handle all types of medical or surgical conditions, the hospital uses state-of-the-art equipment and provides around-the-clock care for critically ill and injured patients.

Fortunately for Jack, a standard poodle, he is alive today because of the emergency care he received at the veterinary hospital. Battling a sudden infection that spread rapidly throughout his body, he was close to death as his lungs filled with fluid. Following the recommendation from a local emergency clinic, his owner had him rushed to UC Davis by veterinary ambulance. After five days on a mechanical ventilator and an additional week of care at the hospital, Jack recovered and was able to return home.



Small Animal Emergency and Critical Care Service

As with Jack, the Small Animal Emergency and Critical Care Service provides life-saving care for cats, dogs and other companion animals through its two 24/7 facilities—the Emergency Room and the Steve C. Haskins Intensive Care Unit.

The small animal emergency team consists of board-certified faculty in emergency and critical care medicine, resident and intern veterinarians, veterinary students and both emergency and critical care technician specialists and certified veterinary technicians who provide constant patient care monitoring. Also benefitting patients is the service's close collaboration with other specialty services such as Cardiology, Diagnostic Imaging, Hemodialysis and Renal Medicine, Internal Medicine, Neurology and Neurosurgery,

Oncology, Ophthalmology, Soft Tissue Surgery, and Orthopedic Surgery to provide expert care as needed for each patient.

The Steve C. Haskins Intensive Care Unit is one of the longest-running veterinary critical care centers in the nation. With some of the most advanced and exclusive capabilities, the unit is at the forefront of offering cutting-edge care—including long-term ventilation support for patients unable to effectively breathe on their own; managing patients with multiple organ disorders; and postoperative support for patients such as those that have undergone craniotomies (brain surgery) or cardiothoracic surgery.

Equine Emergency and Critical Care Service

The equine emergency team rapidly evaluates critically-ill or injured horses to determine the severity of the problem and provides stabilization, treatment and diagnostic testing. There is a full range of experienced, board-certified veterinarians, supported by resident veterinarians, technicians and veterinary students.

Monitoring and diagnostic technologies are available at all times, including blood and body fluid analysis, ultrasonography, electrocardiogram monitoring, blood pressure monitoring, colloid oncotic pressure and osmolality measurements, central venous pressure monitoring, pulse oximetry and cross-matching for blood transfusions.

The Lucy Whittier Neonatal Intensive Care Unit is led by a board-certified critical care specialist and is ready to handle the most complicated neonatal foal cases, including prematurity, colic, maladjusted foal syndrome, angular limb deformities and sepsis.

Continued on page 6



What is board-certified?

In order for a veterinarian to become board-certified, they must complete a two- to four-year advanced training program (residency) after graduating from veterinary school (and generally after a postgraduate one-year internship at a veterinary hospital), depending on the specialty. During those years, they serve as a key member of the clinical team, training under the tutelage of an already board-certified veterinarian. Following their residency, they must complete a rigorous qualifying examination, which awards them diplomate status (board certification) with an "American College" of a particular veterinary specialty, such as the American College of Veterinary Emergency and Critical Care. Only board-certified veterinarians can be referred to as a "specialist" of a veterinary discipline. UC Davis hosts the nation's largest advanced training program, currently offering positions in 32 specialty disciplines, and has offered as many as 35 in the past.

Our vision for the future



Small Animal Emergency and Critical Care Service

The Small Animal Emergency and Critical Care Service aims to continue to be a world leader in the field, striving

to provide the best patient care possible through the practice of cutting-edge medicine with a compassionate, team-based approach. With an exponentially growing caseload, the new Veterinary Medical Center is key to bringing new breakthroughs in our specialty to our patients. We strive to advance the specialty by aiming for excellence in medical care, education and research.

Dr. Steven Epstein, DVM, DACVECC
Chief of Service



Equine Medical Emergency, Critical Care and Neonatology Service

Equine Medical Emergency and Critical Care has made significant advances over the years. Our vision is to

achieve even higher quality medical capabilities with the new Veterinary Medical Center. The center will provide the backbone for a future with creative and scientific advancement in equine medicine and neonatal intensive care.

Dr. Gary Magdesian,
DVM, DACVIM, DACVECC, DACVCP
Chief of Service

Roberta A. and Carla Henry Endowed Chair in
Emergency Medicine and Critical Care



Equine Surgical Emergency and Critical Care Service

The success of equine surgery and anesthesia has improved

exponentially in the past 50 years. The new Veterinary Medical Center will allow us to consolidate the veterinary and technological resources in one location to improve the diagnosis and management of emergency patients and foster the advancements of the next 50 years.

Dr. Julie Dechant,
DVM, MS, DACVS, DACVECC
Chief of Service

Planning for the future

UC Davis Veterinary Medical Center

At the UC Davis veterinary hospital, we are committed to providing the highest standard of compassionate care and clinical excellence for beloved animals, from parakeets to Thoroughbreds. To carry that commitment into the future, we envision creating a new UC Davis Veterinary Medical Center—a center of healing, innovation and discovery.

The new Veterinary Medical Center will enable our clinicians to provide exceptional care for our patients while accommodating a rapidly growing caseload. Like the existing veterinary hospital, it will serve as the intersection of teaching and discovery. During the transition, we will

address constraints in space, layout and capacity so that we can continue bringing together the brightest minds and most advanced technologies.

The school is in the early planning stages of developing the physical layout of our center using a phased, sequenced approach that allows for new construction and smooth operation of our clinical services and patient care. The planning effort—guided by leadership from the hospital as well as faculty, staff and house officers—has identified major areas to be constructed in sequence over the next 10 years.



The first patient care service of the Veterinary Medical Center planned to come online is the Livestock and Field Service Center (a cut-away view of an artist's rendering pictured above). In designing the center, the school consulted with Dr. Temple Grandin, PhD, renown for her groundbreaking work in engineering humane animal facilities and a fellow in the Society of Biological and Agricultural Engineers. Dr. Grandin (left) met with campus architect Bill Starr to refine preliminary plans for the center—to design the best possible environment for livestock patient handling care and clinical teaching emphasizing modern concepts in animal welfare.

24/7 emergency care continued from page 5

Board-certified surgeons are available to immediately evaluate, diagnose, and if necessary, perform surgery on equine patients if an emergency should arise. Our surgeons utilize the most advanced surgical techniques available—including minimally-invasive approaches such as arthroscopy, laparoscopy, thoracoscopy, lithotripsy, and endoscopic laser surgery. In addition to traditional fracture repair techniques, equine surgical specialists use

state-of-the-art orthopedic techniques. These techniques, such as the Accu-trak screw and the locking compression plate, minimize irritation to nearby structures, while maximizing repair strength and improving the healing response. Decisions regarding the surgical approaches and techniques to be used, either traditional or minimally invasive, are always made with the goal of optimizing patient outcome.

Partners in Livestock Health

Today's agriculture is increasingly global. As the world population grows, so does the demand for safe and quality animal proteins. The emerging food animal health issues facing a university of the 21st century require us to prepare our veterinary students to enhance the productivity of animal agriculture, improve animal health, animal welfare and promote public health.

Veterinary Medicine Teaching and Research Center

Educating and training the next generation of veterinarians by offering on-farm clinical medicine training and residencies in dairy production medicine; finding solutions to enhance cow health and promote productive cattle herds

Center for Animal Disease Modeling and Surveillance

Developing modeling systems that can be used to prevent, control, or eradicate animal diseases and their associated adverse economic impacts

Western Institute for Food Safety and Security

Providing research, biosecurity and food safety training, and outreach programs for global food safety and defense in all sectors of the food system; environment to consumer

State and Federal Food and Agriculture Agencies

Collaborating with state & federal (CDFA/USDA) agency professionals to assure the safety, availability and affordability of agricultural products; protecting public and animal health while enhancing stewardship of the environment

UC Davis Veterinary Hospital

Providing livestock care to maintain healthy animals, enhance animal well-being, train DVM students and residents, and promote cutting-edge clinical research

California Animal Health and Food Safety Laboratory System

Protecting the health of livestock and poultry, and safeguarding public health, through rapid and reliable diagnoses of animal diseases, including those affecting humans

Center for Food Animal Health

Advancing livestock, public and environmental health through a competitive research grant program

Food Animal Drug Residue Avoidance Database

Providing science-based expert advice to help mitigate unsafe chemical residues in products derived from food animals

Animal Agriculture Stakeholders

Partnering with livestock producers, referring veterinarians, campus colleagues and allied industries to support healthy, safe and nutritious animal-based food products; driving research, ongoing animal health surveillance, and policy development related to a safe and secure food supply

UC Agricultural and Natural Resources/Cooperative Extension

Serving California and beyond, faculty and veterinary specialists conduct research, and outreach activities to promote animal agriculture



Happiness is a day at the beach with Jack

Jack, a good-natured standard poodle, and his owner Jeannie Dixon enjoy spending hours at the beach on the scenic Sonoma coast. Watching Jack running through the surf on a sunny day is pure happiness for her. They have been enjoying this activity together for over a decade.

But when Jack was just 16-months-old, Jeannie feared that their favorite pastime would be cut short. Her loyal companion nearly lost his life from an illness that started out innocently as an irritating cough during the middle of the night. But then Jack quickly developed a fever, and his condition rapidly deteriorated. His lungs were filling with fluid as the infection spread throughout his body.

Jeannie and her husband, Ken, rushed Jack to a local emergency veterinary clinic. Upon examination, the veterinarian recognized the severity of Jack's condition and recommended having him transported immediately by veterinary ambulance to the UC Davis veterinary hospital.

“Jack is now 12 years old, and there is no doubt that his life would have ended when he was not much past a year old, if it weren’t for the care he received at the Small Animal Emergency and Critical Care Service at the UC Davis veterinary hospital.”

— Jeannie Dixon

He felt that the hospital's ventilator would be Jack's only chance of survival.

When Jack arrived at the hospital, his body was beginning to shut down, and he was close to death. Admitted to the Small Animal Emergency and Critical Care Service, he was placed on a ventilator to support his lungs while being administered antibiotics and fluids. Jack received 24-hour monitoring and one-to-one care from the veterinary team.

Jeannie recalls when Jack was in the hospital's Intensive Care Unit. She is grateful to the compassionate ICU team, who permitted her to spend time with him. She was able to stroke his head and whisper into his ear. Jeannie lovingly placed a photo close by, showing Jack running on the beach and offering his care team a glimpse of his happy demeanor.

After five days in the ICU and an additional week of recovery at the hospital, Jack was able to return home. The day that Jeannie and Ken brought him home was one of the happiest days of their lives.

Jack always held a special place in Ken's heart. The two shared a close bond. So while sadly Ken passed away four years ago, it has been of comfort to Jeannie to know that Jack keeps a connection with him alive.

Over the years, Jeannie brought Jack to the veterinary hospital when he had health problems. She notes that when Jack returns here, he remembers where he is and knows that he will be getting a lot of attention.

“Meeting and talking with veterinary students when they do the first examination is great,” Jeannie said. “They are learning and accomplishing so much at UC Davis, and it is inspiring to think of the futures that lay ahead for them.”

Thanks to the Small Animal Emergency and Critical Care Service, Jack recovered from his serious infection and enjoys the beach with his favorite person, Jeannie Dixon. (photo courtesy of Jeannie Dixon)



An enduring love for *cats*

Kathleen Lawton has always loved cats because of their beauty and affectionate nature. Since cats have enriched her life and brought her much joy, she is committed to helping them live healthier and longer lives.

“Cats are and have always been for me the most entrancing creatures on earth—beautiful to look at and to listen to,” Kathleen said. “What is more soothing than a soft, low purr?”

She is especially fond of the British Shorthair breed. Kathleen’s passion began in 1974 when she first saw this breed at cat shows in Europe. Her passion inspired her to become a dedicated breeder and exhibitor. British Shorthairs from her lines have competed successfully and gone on to become grand champions and national award winners.

“UC Davis offers hope—for research, for treatment, for a cure. We who’ve suffered loss always hope that a new generation of animals, one day, will not have to endure some of the diseases that plague our animals today. And so we look to UC Davis, knowing that our animals’ future is in the best of hands.”

— Kathleen Lawton

Described as a “teddy bear” in feline form, the British Shorthair has a sturdy body, dense coat and captivating, amber-colored eyes.

“British Shorthairs are independent, funny, intelligent, non-demanding—and fascinating, lovable companions,” Kathleen added. “My love affair with them continues unabated. They are truly my life companions.”

She is committed to providing her cats with the best veterinary care and appreciates the exceptional care at the UC Davis veterinary hospital.

Kathleen recalls a time when she was out of town and left her feline companions in the care of a pet sitter. One of her cats had become seriously ill, experiencing symptoms of lethargy, vomiting and lack of appetite. The concerned sitter rushed her cat to a local emergency veterinary clinic that recommended performing invasive surgery to determine the cause of the illness.



Kathleen Lawton adores Sweeney, one of her cherished feline companions and grand champion British Shorthair cats.

(H. Henningsen, Portrait Artist photo)

Informed of the recommendation, Kathleen objected and asked the pet sitter to bring her cat to the UC Davis veterinary hospital. Kathleen considers herself fortunate to live only about an hour away from the hospital.

“The emergency team examined my cat and ran tests that determined the best course of treatment was to put him on a special diet, all without frightening and invasive surgery,” Kathleen said. “I cannot imagine how this would have resolved had it not been for the UC Davis experts.”

Grateful for the excellent care, Kathleen is a devoted supporter of the School of Veterinary Medicine. In honor of her beloved cat Sweeney, she has established the Sweeney’s Endowed Scholarship Fund. In addition, she has made a bequest to the school with the hope that her gift will help advance feline health for future generations.

“Cats have given me nothing but joy these many years. I do not count the heartbreak,” Kathleen said. “My heart is with all cat-lovers who are devoted to their cats. I know that UC Davis is in the vanguard of all treatment and cat care. My hope is that cats will have healthier lives thanks to all the work being done at the School of Veterinary Medicine.”

Neurologists help Leah regain mobility

Leah, a 4-year-old female border collie, got loose from her owner and went missing for the night. When a local veterinary facility found her the next day, they immediately called her owner and informed her of Leah's injury—a facial laceration that they suspected was the result of a deer kick. Otherwise, she was alert, ambulatory and normal. Her wound was repaired, and Leah was on her way home. Two days later, however, Leah became acutely non-ambulatory. She had minimal motor function in all four limbs, and was unable to sit up on her own.

Leah was then hospitalized with a suspected case of tetanus, a bacterial disease that can severely affect the nervous system. She was treated with an anti-toxin and other supportive care and monitored. Her severe tetraparesis (weakness in all four extremities) did not improve for three weeks. Leah's veterinarians no longer suspected tetanus and were much more concerned for a spinal cord injury, so they referred her to the UC Davis veterinary hospital.

Once at UC Davis, specialists in the Neurology/Neurosurgery Service performed a CT scan and an MRI to determine the cause of Leah's condition. She was diagnosed with an atlanto-occipital luxation (dislocation of the skull from the spine) and fractures

Leah was diagnosed with an atlanto-occipital luxation (dislocation of the skull from the spine) and fractures of the first vertebra and the back of the skull. These injuries were compromising her spine, causing temporary paralysis.

of the first vertebra and the back of the skull. These injuries were compromising her spine, causing temporary paralysis.

Faculty neurologists Drs. Pete Dickinson and Karen Vernau, along with neurology resident Dr. Devin Ancona, attempted to reduce the luxation via both closed (non-surgical) and open (surgical) approaches. Both attempts were unsuccessful, however, due to the amount of fibrous tissue that had built up in the three weeks of healing since the initial injury. Therefore, surgery to decompress Leah's spinal cord was necessary.

An incision was made behind Leah's skull to allow the neurosurgeons access to her skull and vertebrae. They drilled away the top of Leah's first vertebra and a small area of the back of her skull, necessary to open that area and decompress the spinal cord. Following the successful

surgery, Leah recovered for the night in the hospital's Intensive Care Unit, where she received individual monitoring from specially-trained technicians. It was important Leah remain on strict rest without turning or twisting her head overnight. She was moved to the Intermediate Care Ward (ICW) after an uneventful night of rest and recovery.

After two days of recovery in the ICW, where she showed voluntary motor function in her limbs, Leah was transferred to the neurology ward where she continued to improve. By the time Leah was discharged the following day, she was able to support herself lying sternally. Leah's owner took her home with instructions of strict cage rest and a physical rehabilitation plan with the Integrative Medicine Service once Leah was neurologically stable.

At Leah's one-month recheck appointment, she had improved significantly and was able to stand without support and take a few steps. She was still considered non-ambulatory given her inability to remain standing and walk without falling, but her improvement over the previous four weeks was suggestive of a positive prognosis for return to ambulation. She was "green lighted" to begin physical rehabilitation with the Integrative Medicine Service.

Following two weeks of physical rehabilitation, Leah was walking on her own. She gradually improved with continued rehabilitation over the next month, and is now making progress at a facility closer to home.



Meet Dr. Emily Schafer, resident in Equine Internal Medicine

Dr. Emily Schafer

Hometown: Harrisburg, Pennsylvania

Education: VMD, University of Pennsylvania

Why did you choose the UC Davis residency program?

The list is long! Most importantly, it was the attitudes of the faculty members during the interview process. Each of them clearly had high expectations of their future residents and yet were able to maintain a friendly and encouraging atmosphere. That's a fine line to walk, and many other places, in my opinion, stray to one side or the other. Or neither.

Other factors included the barn-like outdoors campus, the California sunshine, and breadth of exposure to different hospital services in this residency.

What do you plan to do at the completion of your residency (personal and career-wise)?

Professionally, I'm looking for a relatively large institution with fellow internists to continue brainstorming about cases on a daily basis. I've also really enjoyed working with students this year and a half. The visible "ah-ha" moments are priceless and a big motivator for considering academic clinical positions. Private practice has its appeal for other reasons, and is certainly not off the list.

Personally, I plan on spending a lot more time in the saddle, on a mountain bike, or hiking long stretches of country trails (preferably without a cell phone).

Are you working on a resident research project? Can you share a little bit about that project?

Equine coronavirus is an emerging gastrointestinal disease in horses that behaves differently in them than in other species. We're learning about its common effects on horses and how infected horses spread it to others. The project has pretty big implications for understanding how to prevent disease and potentially recognize clinical signs earlier.



What makes your work so rewarding?

Solving problems. We, unfortunately, can't solve every problem that presents to us, but we have quite the arsenal of tools to give us (and the horse) the best chance possible. Of course the advanced equipment at the university are great tools, but it's really the expert minds and cumulative years of experience working together that get us to our goals of diagnosing and successfully treating patients. Additionally, listening to our animal patients that don't have the gift of speech adds an irresistible intrigue that makes me feel like Sherlock Holmes. The most rewarding part is, if you listen hard enough, you usually get a "thank you."

Why did you choose to become a veterinarian and seek advanced training?

I became a veterinarian because horses ran in my blood and I was a good science student; it was the only thing that made sense. The advanced training part came a little later when I realized that veterinary school enabled me to solve a lot of the everyday problems, but not the more difficult or unusual ones. There is always a reason an animal gets sick, no matter how obscure, and I wanted to find it. The Internal Medicine Residency at UC Davis is expanding my mental problem-solving toolbox, and I'll be a better veterinarian for it.

(654W)
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Heritage Society for Animals



Michael and Mary Sims, members of the Heritage Society for Animals, enjoy seeing the digital display honor roll. The society recognizes friends who have chosen to express their commitment to animals through planned gifts to the School of Veterinary Medicine.

To learn more about becoming a member of the Heritage Society for Animals, please contact the Office of Development at (530) 752-7024.

Upcoming Events

UC Davis Picnic Day • April 22, 2017
Includes tours of the veterinary hospital.

**California Raptor Center
Spring Open House** • May 6, 2017

If you are interested in attending these events, please contact us for more information at (530) 752-7024.

Stay Connected

For Appointments Call:

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