The UC Davis School of Veterinary Medicine was recently ranked the #1 veterinary school in the world by QS World University Rankings and #1 in the United States by U.S. News and World Report Graduate School Rankings. These two rankings—which represent veterinary medical teaching, research and service—are widely considered to be of the most influential international and national university rankings. With more than 500 students enrolled in its 4-year DVM program, UC Davis has built a curriculum based on sound educational principles, designed and delivered by eminent faculty who are leaders in their respective fields. Additionally, the hospital’s house officer training program is the largest of any veterinary school in the country, while more than 170 graduate students pursue science training leading to advanced degrees at the school.

“The recognition of the pre-eminent position of our school reflects the excellence of our faculty, staff, and students who serve the citizens of California and our global society, advancing the health of animals, people, and the environment,” said Michael Lairmore, dean of the school.

Through the extensive VMTH in Davis, and satellite clinics in Tulare and San Diego, the school provides clinical services throughout the state, with training for house officers and students in 34 primary care and specialty disciplines. The hospital provides state-of-the-art clinical care to more than 48,000 animal patients each year, a caseload that provides the basis for a robust and diverse clinical training experience for students and house officers.

The school’s cadre of faculty, staff, students, and alumni are advancing health through their research endeavors, clinical patient care, educational pursuits, outreach and public service locally and globally. These recognitions and #1 rankings are a testament to the school’s community, its irrepressible dedication and energy, and high standards for excellence in leading veterinary medicine and advancing societal needs.
Clinicians Win National Awards

Faculty members from the Companion Exotic Animal Medicine & Surgery Service recently won prestigious national awards, distinguishing them as premiere clinicians in the care of exotic species. The Service treats birds, turtles, rabbits, snakes, fish, frogs and many other exotic companion animals.

Dr. Joanne Paul-Murphy, chief of the Service, received the T.J. Lafeber Avian Practitioner of the Year Award in recognition of her contributions as an outstanding practitioner who is advancing the quality of health care for companion birds. Award recipients are selected by an independent committee of members from the Association of Avian Veterinarians. Dr. Paul-Murphy is highly regarded in avian and exotic animal medicine, and recently became the first veterinarian to be awarded, in one year, an annual research grant from the American Association of Zoo Veterinarians, the Association of Avian Veterinarians, and the Association of Exotic Mammal Veterinarians.

Dr. Michelle Hawkins received the Oxbow Exotic Mammal Health Award in recognition of her sustained excellence and innovation in the field of exotic mammal health. The award is presented by Oxbow Animal Health, in conjunction with Association of Exotic Mammal Veterinarians. As associate professor of avian and exotic pet medicine, Dr. Hawkins’ teaching focus is in small mammal medicine and surgery and her main research focus is in anesthesia, analgesia and critical patient care for exotic small mammals, birds and reptiles.

Congratulations, Drs. Paul-Murphy and Hawkins. These awards are a testament to the dedication our exotics team has to the advancement of companion avian and exotic animal health, and the excellent level of patient care and service the VMTH is able to provide to its clients.

UC Davis Treats Several Rescue Dogs with Same Injury

The Dentistry and Oral Surgery Service (DOSS) has been busy during the last six months with a group of rescue dogs whose jaws were in need of repair. In jeopardy of being euthanized due to their extensive injuries, three dogs were brought to UC Davis for one last ditch effort to save them. Luckily, all had been rescued by Marley’s Mutts, a non-profit organization that rescues, rehabilitates, trains and re-homes dogs from Kern County’s (CA) animal shelters.

The first to be seen by DOSS was Jaws, nicknamed so because of his condition—a bilateral mandibular fracture. Found by Marley’s Mutts, Jaws was in danger of having his lower jaw amputated, or worse—being euthanized. However, when Marley’s Mutts posted his picture on Facebook, Dr. Karen Vernau, a UC Davis veterinary neurologist, responded to the post with information that her colleagues in DOSS may be able to save his jaw. Within just a few days, Jaws was at the hospital, and his jaw was reconstructed by faculty members Drs. Frank Verstraete and Boaz Arzi, and resident Dr. Peter Stroem.
Large Animal Clinic Treats World Champion Horse

In 2012, Irish sport horse stallion Flexible was coming off a spectacular year. He, along with rider Rich Fellers, won the FEI World Cup and also competed in the London Olympics. Flexible was named International Horse of the Year, and Fellers was named Equestrian of the Year by the United States Equestrian Federation.

In 2013, however, Flexible was diagnosed by his primary veterinarians with aorto-iliac and right femoral aortic thrombosis—blood clots in four arteries in his right hind, including the aortic and femoral arteries. His team decided to bring him to California for further evaluation by the world-renowned equine veterinarians at the teaching hospital’s Large Animal Clinic. Flexible was seen by a multitude of equine specialists, including: Dr. Jorge Nieto, a surgical and sports medicine specialist; Dr. Monica Aleman, an internal medicine and neurology specialist; and Dr. Mary Beth Whitcomb, an equine ultrasound expert. This team—in concert with Fellers, Flexible’s owners, primary and other well-known international veterinarians, and a human healthcare surgeon from the UC Davis Medical Center—developed a treatment plan best suited for Flexible and his future.

Surgery was recommended as an option to treat this condition, but would most likely result in Flexible’s retirement from show jumping. Another option was treating the clots with blood thinners. The team chose the latter, as retirement was not in the cards for Flexible.

At a three-month recheck examination, Flexible’s condition remained relatively the same. Eight- and ten-month rechecks, however, revealed a dramatically improved situation. Multiple vessels had blood flow through them, although there was still occlusion of the right femoral artery and also branches of both left and right internal iliac arteries. Overall, though, his condition was improving. Fellers started showing Flexible again, and the two went on to finish 7th at the 2015 FEI World Cup.

As Jaws was recovering from the surgery, the issue of his name was discussed on Marley’s Mutts’ Facebook page. An overwhelming number of followers voted to rename him Davis, after the university that saved him.

“We were so impressed by the oral surgeons and everyone at UC Davis, that we thought it was a fitting name,” said Zach Skow, founder of Marley’s Mutts. “Normally, a dog with that severe of an injury will probably be put down. We were so thrilled UC Davis helped us save him.”

Davis healed wonderfully from his surgery, and has since been adopted into a permanent home.

Marley’s Mutts has also brought two more dogs to UC Davis with jaw injuries. A German shepherd nicknamed Lou Reed was brought to the hospital when the rescue group found him after he was most likely hit by a car. During treatment by faculty, assisted this time by resident Dr. Sophie Doering, Lou’s photo was posted to Facebook. Because the Marley’s Mutts Facebook page is liked by more than 250,000 people, word of the shepherd at UC Davis spread quickly. It turned out Lou was really named Bear. His owners saw the post and traveled to campus to retrieve him.

A few months later, when Marley’s Mutts received injured Zena after she was surrendered by her owners, they knew just where to take her to get her jaw corrected. After most likely being attacked by another dog, Zena also suffered a mandibular fracture. The DOSS team performed a surgical implantation of an interdental wiring technique and an intraoral composite splint, which gave structural support to the jaw as it healed. Zena will return to the hospital soon to receive further treatments on her jaw, as Marley’ Mutts works to find her a permanent home.

Thanks to Marley’s Mutts and UC Davis, all of these dogs’ lives were saved, and a new connection was formed that may save many more rescued dogs in the future.
VMTH Provides Highest Level of Advanced Training

Every year, the VMTH welcomes a new group of resident veterinarians who have chosen to train at the hospital for two to four years in order to become board certified specialists in a particular clinical discipline. Training under the tutelage of UC Davis’ more than 120 already board-certified faculty members, these residents gain valuable experience with a multitude of challenging cases, thanks to the high caseload.

Various specialty colleges—such as the American College of Veterinary Internal Medicine or the American College of Veterinary Emergency and Critical Care—certify veterinarians who have completed advanced training. Veterinarians can undertake specialized training at a teaching hospital any time after graduation from veterinary school. Most residency programs require a minimum of a one-year internship or private practice experience before residency. Residencies generally involve a three-year program of hands-on clinical care, in depth study and clinical research. The residents are crucial members of the hospital’s clinical team.

Upon completion of the training program, resident veterinarians must then pass a difficult board certification examination given by the specialty colleges. They are then deemed Diplomates of the specialty college under which the training was pursued. Only Diplomates are considered “specialists” in that specific field of veterinary medicine.

The Large and Small Animal Clinics provides advanced training in 34 specialty disciplines to more than 100 residents, the largest residency training program of any veterinary hospital. Positions in the residency training program are highly competitive and focus on the most up-to-date diagnosis, techniques and treatments of ailments and injuries in that specialty.

Thanks and Praise from Grateful Clients

“A million thanks to the Dentistry and Oral Surgery Service for bringing a healthy life back to Garfield. With the amazing work, Garfield is a happy cat again and can enjoy his food.”

– Jimmy, Elk Grove, California

“Please accept this sincere expression of my appreciation for the extraordinary efforts of Dr. Wiebe and the Pharmacy. My dog Brady and I are fortunate to have Dr. Wiebe as such a caring member of the UC Davis veterinary team.”

– Michael H., Tulare, California

“To the extraordinary team at the Large Animal Clinic—we want to extend our deepest gratitude to everyone who cared for our magnificent and beloved Chip. Your team, led by Dr. Nieto, could not have been more caring and understanding. The team was a shining example of dedication and compassion.”

– Mark and Julie B., Santa Rosa, California

“Thank you so much for taking care of Starburst, and helping her have a healthy calf, Miss Peppermint Patty. Both are doing great.”

– Gina O., Rio Oso, California

“Thanks again to Dr. Meadows and Community Practice for everything you did for Kobe. His experience with you guys was the best he’s ever had with any vet, and it makes me so happy that you all were a part of his care team.”

– Mike and Alicia B., Woodland, California
Many of the patients that come to the veterinary hospital have illnesses that require advanced diagnostics. A broken leg can be a straightforward diagnosis for a clinician, but a viral infection can be more difficult to determine. In many cases, the expertise of the Clinical Laboratory Services is crucial in diagnosing an ailment and determining the course of treatment to pursue.

Compared to smaller veterinary clinics that may not have the capabilities to perform a multitude of diagnostic tests, the hospital’s labs are equipped to perform and interpret a very extensive and diverse array of laboratory offerings. Beyond testing samples from hospitalized patients, the VMTH labs are pleased to offer their services to referral partners and the veterinary community at large.

The labs are staffed with experienced technicians who hold a number of advanced degrees (MS, MD, PhD), and many are licensed Clinical Laboratory Scientists. This diverse complement of labs includes hematology/cytology, chemistry, microbiology, immunology/virology, parasitology, transfusion medicine, regenerative medicine, and clinical pathology. Each lab is guided by faculty experts in the respective fields.

The lab equipment is state of the art and intended for high-throughput testing and rapid generation of results. In fact, the equipment and analyzers are the same as those used in human medicine, with the same rigorous quality control protocols in place.

Because of the hospital’s extensive caseload and lab client base, the skill set of the lab staff is extremely diverse. Lab staff analyze samples from all walks of the animal kingdom, and from Community Practice to the ICU. In addition to the hundreds of dog, cat, horse and livestock samples, on any given day, the labs may evaluate a cytology sample from an elephant, a chemistry sample from an exotic bird, or a microbiology submission from a dolphin—all accomplished due to the lab expertise.

Did You Know?

… that Dr. Polina Vishkautsan has been named the new Small Animal Clinic Infectious Disease Control Officer? Dr. Vishkautsan is board-certified in small animal internal medicine and is currently pursuing a fellowship in small animal clinical infectious diseases.

… that the VMTH recently passed its renewal accreditation survey with the American Animal Hospital Association? We passed with flying colors, as our scores were even higher than our accreditation three years ago.

… that former Dentistry and Oral Surgery Service resident Dr. Amy Fulton was recently awarded the American Veterinary Dental College’s Outstanding Candidate Award? That’s makes three years in a row that UC Davis residents have won the award, with Drs. Boaz Arzi and Ana Nemec winning previously.

… that we are entering high season for ticks? Contact our Community Practice Service at 530-752-9811 to discuss preventative tick treatments for your pets.
Maizie, a 2-year-old border terrier, was recently treated by the VMTH’s Theriogenology Service for breeding management. Maizie’s owner, Elizabeth, is a nationally recognized border terrier breeder with more than 40 years of experience with the breed. She has had great influence on the quality of this English breed’s presence in the United States. Border terriers are not common in the U.S., but make wonderful family companions.

Elizabeth had special plans for Maizie’s breeding. Twenty years prior, she owned a spectacular male border terrier named Remy. He was an important sire and nationally recognized show dog for the breed in the U.S., with excellent structure, movement and temperament. During his life, Remy produced 44 champions, and was considered one of the foundations of border terriers in America. His semen was collected and frozen in 1994, with the hopes of using it later on a quality female border terrier. Elizabeth waited 20 years to find just the right match—Maizie—for Remy’s frozen semen.

Using frozen semen to achieve a successful breeding is a delicate process. It carries a much lower conception rate than the average breeding with fresh or chilled semen. Frozen semen must be used precisely because it is inherently more fragile, and has shorter longevity to achieve fertilization of an egg. Although it is more challenging to use successfully, frozen semen breedings can greatly benefit the dogs of excellent breed merit and health. Male dogs from years past can enrich breeding programs happening present day. It also allows for international transport of genetics and a broader genetic pool for those breeds that are few in number in the U.S. Semen exceeding 30 years since freezing has successfully been used in dogs, and the potential for hundreds of years of longevity has been suggested.

The Theriogenology Service routinely saw Maizie during her heat cycle to evaluate her for optimal time of breeding. Testing included evaluation of her vaginal cytology, progesterone testing, and visual evaluation of her vaginal canal. Using these clues, the best possible window for optimal conception with frozen semen was established. On the day Maizie was most fertile, the semen was thawed and placed into her uterus.

Approximately one month later, an ultrasound was performed on Maizie to evaluate for a pregnancy. Four healthy fetuses with heartbeats were seen growing in early pregnancy. At term, the puppies were delivered by a planned C-section, all with excellent health and vigor.

The litter has been growing and thriving since delivery, receiving regular check-ups at the VMTH, including vaccination and deworming. Maizie took to motherhood immediately, regularly tending to her puppies’ needs. Having come from such desired stock, the puppies may have great influence in carrying on the breed characteristics of the border terrier for generations to come.
Tiny Tim, an approximately 40-year-old desert tortoise, was brought to the VMTH because of a decreased appetite. The owners had acquired the tortoise in 1980 and never knew the sex, so it was given a masculine name. Once at UC Davis, though, it was quickly discovered that Tiny Tim was a female.

The hospital’s Companion Exotic Animal Medicine & Surgery Service began evaluating Tiny Tim by conducting multiple diagnostic tests, which included radiographs that easily identified her as a female. The x-ray images from the radiographs revealed six eggs in the main area of her body cavity. The shells of the eggs appeared heavily calcified and were abnormally thick.

Eggs in a tortoise can remain there for months or even years if she cannot find the proper place to lay them, or if there is a medical issue causing her to be unable to pass them. The thickness of the eggs revealed to Dr. David Guzman that they had been in the reproductive tract for a long time—at least since last breeding season—and were not fertile. (Tiny Tim didn’t have a known mate.) The eggs, however, were of normal size and could potentially be passed from her body without surgery.

Dr. Guzman, along with a team of veterinary residents, students, and technicians, began treating Tiny Tim with supportive therapy in an attempt to get her to pass the eggs naturally, including fluid injections under the skin and lukewarm water soaks. Tiny Tim was then administered injections of oxytocin. Oxytocin increases uterine muscular contractions, such that eggs are more likely to be passed. This all had to be closely monitored due to the risks of pushing the eggs into the bladder or coelom, or uterine tears. She was also given injections of calcium, since muscle contractions require calcium, and her blood work indicated that her calcium level was lower than normal. She was also given an injection of an antibiotic to prevent secondary bacterial infections.

Only three eggs passed with medical management, leaving three remaining. Medical management is preferable to surgically removing the eggs due to risks of anesthesia. However, with surgical therapy, an ovariosalpingectomy (removal of the ovaries and oviduct [uterus]) could be performed to eliminate risks of reproductive associated disease in the future.

It was determined that Tiny Tim was not going to pass the three remaining eggs at that time, so she was sent home for a week to see if the eggs would pass. There may have been underlying reasons why Tiny Tim wasn’t passing her eggs. One possibility was the lack of suitable places for digging burrows in which to lay the eggs. Desert tortoises dig multiple burrows as deep as 20 inches into the soil to hide their eggs. If the soil is too compact in her yard, Tiny Tim may have a tough time digging into it. Her owners dug up the earth in a few places so that the dirt was loosely packed. If she was able to dig, Tiny Tim may lay her remaining eggs and avoid surgery.

Unfortunately, she did not lay the eggs, and her inappetence continued. She was brought back to UC Davis a week later for one more day of oxytocin therapy. By the next morning, Tiny Tim had not passed any of the three remaining eggs so she was placed under general anesthesia and prepared for surgery. Dr. Guzman, assisted by veterinary residents, students and technicians, then surgically removed her ovaries, oviducts and the remaining eggs.

The surgery took longer than expected, but was successful. The ovariosalpingectomy was performed using the prefemoral fossa approach, which utilizes the soft area of body wall just in front of the rear legs, such that Tiny Tim had a shorter healing time (about 6-8 weeks) compared to cutting through the shell (transplastron approach). Tiny Tim made a full recovery, and will not have to worry about any potentially negative reproductive issues in the future.

UC Davis exotics veterinarians had to surgically remove inactive eggs from Tiny Tim.
Welcome to the March/April issue of VMTH Heartbeat. As you can see with this issue, the VMTH is a dynamic facility. From training resources for students and house officers, to diagnostic resources for in-house and referral veterinarians, our hospital is far more than a specialty clinic that provides for your animal’s care. It has grown to become Northern California’s preeminent center for veterinary clinical medicine.

Our recent #1 ranking among all veterinary schools in the world is in part based on the excellent reputation the VMTH has built over the years as one of the top teaching hospitals. That reputation allows our students and house officers the opportunity to receive the most well-rounded and in-depth education possible. This education will serve them well as they complete their training programs and begin to carve their own career paths in veterinary medicine during the next few months. We are grateful for their dedication to providing top quality patient care and client service, and are proud of their accomplishments. We wish them well.

Regards,

Dr. W. David Wilson, BVMS, MS, Hon DACVIM, Director, William R. Pritchard VMTH

Featured Clinical Trial

Drs. Bill Culp and Stan Marks are recruiting for a new clinical trial to evaluate if minimally invasive gastropexy is a viable method of performing gastropexies in dogs predisposed to developing bloat or gastric dilation and volvulus (GDV). Owners are encouraged to enroll their dogs if they are of a breed that is predisposed to GDV. For more information about this and other groundbreaking trials, visit www.vetmed.ucdavis.edu/clinicaltrials or email vetclintrials@ucdavis.edu.

CE Calendar

Veterinary Continuing Education
(530) 752-3905, Fax: (530) 752-6728
tweddale@ucdavis.edu

Upcoming Veterinary Continuing Education Events:
- May 30-31  Small Animal Pain Conference, UC Davis
- July 25-26  8th Annual Back to School Seminar, UC Davis
- August 29  One Health Symposium, UC Davis

For more information on these and other upcoming CE events, please visit www.vetmed.ucdavis.edu/ce.

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