A burgeoning service at the hospital is its Equine Integrative Sports Medicine Service. Consisting of an array of complementary medical and evaluative procedures, the service is attracting many clients looking to maximize the performance of their sport horses. Led by Dr. Sarah le Jeune—who is board certified in surgery and sports medicine/rehabilitation, as well as certified in acupuncture and chiropractic—the service offers treatments and evaluations of the entire equine athlete.

With the subtlest issues affecting an athlete, Dr. le Jeune feels it is important to examine every aspect of a horse and its equipment, which can certainly play a role in determining the success of an athlete. One of the most important elements of peak performance can be proper saddle fit. Ill-fitting saddles can be a determining factor in a horse with back pain. Many saddles are too narrow and can pinch a horse’s back, causing significant restrictions of back movement, which is critical to proper functionality of an athlete.

After discovering the cause of pain, there are several treatment options Dr. le Jeune can perform. Some major injuries will require surgery, and she will work with clients to rehabilitate the horse and hopefully return it to competition. Recovery for equine athletes is similar to that for human athletes, and Dr. le Jeune will team with trainers to determine the proper timing of recovery procedures and workouts.

Many times, an athlete’s back, neck or muscle pain can be treated with chiropractic and acupuncture treatments. These procedures are becoming increasingly popular, and can easily be integrated into conventional diagnostic and treatment modalities to optimize clinical outcome.
Over the past year, third-year veterinary student Joe Raleigh had the unique opportunity to take a major role alongside faculty clinicians in a research project that could revolutionize veterinary blood donations. Recently, Raleigh shared his research discovery with a poster presentation at the 2015 International Veterinary Emergency and Critical Care Symposium (IVECCS) in Washington, D.C. With his faculty mentors, Drs. Karl Jandrey and Michael Kent, as well as Clinical Laboratory Manager Julie Burges, Raleigh shared the team’s discovery that found canine blood donations with gross lipemia (higher fat content) yield higher platelet concentrations than those from blood that is not lipemic.

As donations with high blood platelet concentrates are ideal, this research could indicate that something as simple as feeding dogs high-fat foods before a donation could yield better platelet results than from dogs fed non-fatty foods. The team plans to continue this research to assess function of the platelets from lipemic blood donations.

Many faculty clinicians were also present at IVECCS to lecture on various topics in emergency and critical care, including Drs. Linda Barter, Julie Dechant, Guillaume Hoareau, Kate Hopper, Jandrey, Peter Pascoe and Josh Stern. Additionally, Dr. Jandrey, in his capacity as the director of the Center for Continuing Professional Education, hosted an informational booth in the conference’s exhibition hall promoting UC Davis continuing education (CE) events and hospital activities.

IVECCS is the pre-eminent veterinary CE symposium geared specifically toward emergency and critical care providers. Nearly 2,900 veterinarians, technicians, students and practice managers attended the event. The annual state-of-the-art symposium is jointly conducted by the Veterinary Emergency and Critical Care Society, the American College of Veterinary Emergency and Critical Care, and the Academy of Veterinary Emergency and Critical Care Technicians. More than 430 hours of CE credits were offered by 150 speakers.

Full Range of Equine Dentistry Procedures Offered

Equine dental care has experienced a resurgence of interest in the past few years and has become an integral part of every equine practice. The Equine Medicine and Dentistry Service has established excellence in routine and advanced equine dentistry with the goal of promoting education for students and veterinarians, while providing a full range of dental procedures for equine patients.

Board-certified veterinarians in the Service lead a team focused on diagnosing and treating horses with disorders of the teeth, mouth and sinuses. Problems in these areas may affect proper digestion of food or control of the horse while under saddle. Procedures offered by the Service include: teeth extractions; comprehensive oral evaluations; periodontal treatments; and restorations, fillings and endodontics.

Faculty veterinarians are eager to help other practicing veterinarians by offering professional continuing education workshops and laboratories at UC Davis where veterinarians from throughout the country learn about the examination of the horse's oral cavity and anatomy, as well as the use of tools, imaging, and other advanced techniques. The faculty also regularly speak at national and international conferences about new advances in equine dentistry.

In addition, the Service welcomes referring veterinarians and horse owners to contact faculty members to consult on a patient. UC Davis equine dentistry veterinarians can be reached through the hospital’s Large Animal Clinic at 530-752-0290.
The 30th Annual Charles Heumphreus Memorial Lecture will take place January 23, 2016 at the UC Davis School of Veterinary Medicine. This year’s event features world-renowned speakers Grant Moon and Dr. Sue Dyson. Farriers and veterinarians are invited to attend the event (see registration link below), which takes place from 8:15 a.m. - 4:30 p.m. Morning lectures will be in Gladys Valley Hall, Room 1020, and the afternoon forging demonstration will be in the Large Animal Clinic’s covered arena.

Farrier and world champion blacksmith Grant Moon, CJF, AWCF, will present “Shoeing Made Simple” in his morning lecture and afternoon forging demonstration. Moon’s lecture/demonstration will focus on simplifying the vast amount of available products while respecting shoeing fundamentals to benefit the sport horse.

Equine lameness expert Dr. Sue Dyson, MA, VetMB, PhD, DEO, FRCVS, will present “Thirty Years of the Foot in Equine Veterinary Medicine.” Dr. Dyson is the first repeat Heumphreus speaker, and will highlight how far the profession has come over the past 30 years in its knowledge of equine foot lameness.

Over the years, the Heumphreus Lecture has served as an opportunity for farriers and veterinarians to share insights and collaborate on industry best practices. A veritable “who’s who” of farriers and veterinarians have served as past guest lecturers. As equine podiatry becomes even more of an evolving field, this year’s event proves to be a “can’t miss” opportunity for continuing education surrounding the horse hoof.

Veterinarians may earn up to 6.5 hours of continuing education credit. More information and registration is available at www.vetmed.ucdavis.edu/ce.
Two hospital clinicians were recently named winners of faculty awards presented by the School of Veterinary Medicine. Dr. Julie Dechant was honored with the 2015 SVM Distinguished Faculty Teaching Award, and Dr. Gary Magdesian was selected for the 2015 SVM Faculty Clinical Excellence Award.

Dr. Dechant was recognized for excellence in teaching of students and residents, sustained contributions in large animal curriculum development, and highly effective outreach and continuing education. Beyond substantial clinical teaching responsibilities, she has assumed increased lecture and laboratory teaching of students across many disciplines. Actively engaged in planning and implementation of the new professional curriculum, especially the large animal and equine streams, Dr. Dechant also serves on the Clinical Education Committee, and is faculty advisor to the Camelid Medicine and Equine Medicine Clubs. Every year, Dr. Dechant coordinates the hugely successful Camelid Symposium, a two-day event that draws hundreds of participants from throughout the western United States and beyond.

Dr. Gary Magdesian was recognized for his passion, dedication, and exceptional knowledge in equine internal medicine, pharmacology, and emergency and critical care which has made him a preeminent clinician in his field. Through cutting-edge research and clinical applications, Dr. Magdesian has redefined patient care in equine medicine. His compassion for patients and clients alike make him a great role model for students and residents. Dr. Magdesian is currently the section head of the Equine Medical Emergency, Critical Care and Neonatology Service, and also serves as the Large Animal Clinic biosecurity officer.

With their clinical, teaching, research, and publishing responsibilities, faculty clinicians can be some of the busiest members of the school. These are much deserved awards for two exceptional members of the faculty.

Did You Know?

... that Large Animal Clinic Patient Care Manager Marika Pappagianis holds safety training sessions several times a year at the hospital? Staff, student employees, volunteers and visitors are trained on general safety, personal protective equipment, chemical safety, zoonotic diseases, infectious disease control prevention, injury prevention, safe practices working with horses, animal handling, and much more.

... that the hospital’s Clinical Diagnostic Laboratories not only analyze samples from VMTH patients, but from clients worldwide? The labs routinely receive many samples from Europe and South America, as well as throughout the United States.

... that VMTH faculty clinicians recently presented at the annual Wild West Veterinary Conference in Reno? Drs. Larry Galuppo (equine health), David Guzman (exotic animal health), Eric Johnson (ultrasound), and Stephen White (dermatology) each presented multiple continuing education seminars.

Large Animal Clinic Patient Care Manager Marika Pappagianis conducts a safety training session at the hospital.
Exotic Specialists Remove Headphone from Turtle’s Stomach

While the overwhelming majority of animals seen at the UC Davis veterinary hospital are dogs, cats and horses, the Companion Exotic Animal Medicine and Surgery Service annually treats thousands of non-traditional pets through regularly scheduled appointments and emergencies. One of those emergencies was a 28-year-old turtle that was suspected of eating a headphone ear bud. The owners found visible bite marks on one of the ear buds, but could not find the matching one of the pair. As an after-hours emergency, the turtle was brought to UC Davis, one of the few 24/7 emergency facilities in Northern California capable of treating a turtle.

After radiographs failed to positively identify the ear bud, the hospital's Diagnostic Imaging Service performed a CT scan, as that was the best imaging modality for finding the ear bud and determining its location. The scan revealed an object that closely resembled an identical bud the owners brought with them. An endoscopic retrieval, if possible, or surgical intervention was recommended to remove the foreign object from the turtle’s stomach.

Drs. David Guzman and Claire Grosset were able to successfully pass a 5.3mm diameter bronchoscope through the turtle's esophagus, and produce a clear image of the ear bud in the pylorus of the stomach, within a large mass of ingested meal worms the turtle was fed earlier that evening. Luckily, rubber tipped endoscopic forceps were able to be used to grasp the foreign body and remove it through the oropharynx, avoiding invasive surgical intervention.

Other animals regularly seen by the Service include more than 250 different species of birds, reptiles, ferrets, rodents, rabbits, and fish.

Thanks and Praise from Grateful Clients

“I would like to thank the Large Animal Clinic for the excellent care of my mare Abby. I was so impressed with the entire staff, from vet techs to veterinarians. Until now, I never really realized just how lucky we are to have a state-of-the-art veterinary facility practically in our own backyard.”

– Laurie H., San Jose, California

“I am expressing my gratitude for the outstanding performance of Dr. Brian Leonard and your staff. The outcome of my horse’s eye surgery has been as good as I could have hoped.”

– George M., San Juan Capistrano, California

“Everyone from the phone answering persons, field service team, office staff, doctors, surgery team, lab techs, and the wonderful medical technicians who cared for my mule Sara around the clock – all were powerfully good!”

– Jeanne V., Woodland, California

“I had the pleasure of meeting Dr. Sarah le Jeune during an extensive pre-purchase exam and couldn’t be more impressed with both her skill as a veterinarian and excellent treatment of both buyer and seller that were present during the exam.”

– Karen S., Fulton, California
Lorelai, a 3-year-old French bulldog, is still young but has already endured a lifetime of medical treatments. At just six months old, she was brought to the emergency room at the UC Davis veterinary hospital after vomiting and having difficulty breathing. The specialists in the Emergency and Critical Care Service diagnosed her with a noncardiogenic pulmonary edema (fluid build-up in the lungs) and aspiration pneumonia, a lung infection caused by stomach fluid being inhaled into the lungs. Lorelai was struggling so much to breathe that mechanical ventilation was started immediately. This required Lorelai to be kept anesthetized while a machine breathed for her. She received around-the-clock, one-to-one nursing care in the intensive care unit (ICU).

Radiographs taken by the Diagnostic Imaging Service showed an abnormality called gastroesophageal intussusception (where the stomach folds abnormally into the esophagus). The Soft Tissue Surgery Service then performed abdominal surgery to prevent the abnormal movement of her stomach and esophagus. The next day, Lorelai was successfully weaned from mechanical ventilation, and no vomiting or regurgitation was noted. One day later, she started eating, and her esophagus and stomach appeared to be functioning normally again. Gastroesophageal intussusception is not uncommon in brachycephalic breeds. As Lorelai had no previous history of gastrointestinal issues, it was likely that the abnormality developed before coming to the hospital as a result of abdominal efforts secondary to either respiratory distress or vomiting. The surgery successfully resolved that issue.

Part of Lorelai’s breathing difficulty was due to a birth defect that caused abnormalities of her throat and trachea. Known as brachycephalic syndrome, the condition is common in breeds such as the French bulldog. To help Lorelai breathe better, upper airway surgery was performed on her throat and nostrils to improve the condition, but, unfortunately, it cannot fix all the problems.

Lorelai was hospitalized for eight days, and was on mechanical ventilation in the ICU for the first five days. While attempting to wean her off ventilation on the fourth day, she had continuous regurgitation despite medical therapy to prevent it. She had to be re-anesthetized and placed back on mechanical ventilation to stop her aspirating again.

Six months later, Lorelai was hit by a car and immediately brought to UC Davis. While suffering a broken right scapula, her bigger issue was breathing difficulties due to bleeding into the lungs. For the second time, she had to be placed on mechanical ventilation to save her life. During this second ventilation period, she also developed pneumonia and had several ups and downs, but ultimately was able to be successfully weaned from the ventilator a week after. She was weaned from mechanical ventilation this second time on her first birthday! Lorelai spent a total of 12 days in the ICU during this stay.

Unfortunately, that wasn’t the last of Lorelai’s problems. Over the next year, she suffered three more bouts of aspiration pneumonia that required hospitalization. Thankfully, all were significantly less severe than her first two occurrences, only requiring hospital stays of 1-3 days.

With her last bout more than a year ago, Lorelai’s owner now reports she is in much better health with a bright future ahead.
Equine Ophthalmologists Return Event Horse to Championship Competition

After an all night drive returning from the March Copper Meadows event, rider and owner Frankie Thieriot turned out her champion three-day eventer horse Chatwin so he could stretch his legs after the long drive. Checking on him a few hours later, she noticed Chatwin had injured his eye, most likely by grazing a tree branch. Having dealt with eye injuries in a previous horse, Thieriot knew the severity of the injury and knew her 7-year-old gelding needed immediate care. She quickly texted a picture of the eye to veterinary ophthalmologist Dr. Rebecca Burwell and asked her where to take her horse.

Having referred patients to the UC Davis veterinary hospital several times before, Dr. Burwell knew just where to send Chatwin, while she called Dr. Mary Lassaline to facilitate the emergency appointment. Luckily, Thieriot’s trailer was still hooked up from the night before so she and Chatwin were quickly on their way to see Dr. Lassaline and the Equine Ophthalmology Service, some two and a half hours away.

“Rebecca said, ‘you’re actually really lucky because in the last few months, Mary Lassaline started at Davis, and in my opinion, she’s the best there is,’” said Thieriot. “That coming from Rebecca, who is viewed by many as the best there is, is quite a compliment. So I knew I was headed to the right place.”

Once at Davis, Dr. Lassaline and her team quickly assessed the injury. They discovered a corneal laceration in the right eye. Chatwin was sedated and Dr. Lassaline performed a standing examination that revealed positive direct and indirect light reflexes in both eyes, and Chatwin’s vision was still intact. Diagnostic tests revealed an infection in the eye caused by the trauma. His biggest issue, however, was that a large triangular flap of his cornea was loose, and would need to be surgically removed.

Following standing surgery, Chatwin was fitted with a subpalpebral lavage catheter in his right lower eye lid to facilitate treatment with ophthalmic solutions. He was then started on an aggressive medical therapy with antibiotics, an antifungal and an anticollagenase to help fight the infection, as well as a nonsteroidal anti-inflammatory drug to ease pain.

Due to the severity of his injury and the need to closely monitor his eye every day, Chatwin needed to be hospitalized for five weeks.

“With the early intervention, expert diagnostics, aggressive medical care, and the ability to monitor him closely to fine tune his medication, I was confident that he wouldn’t lose his vision in that eye,” said Dr. Lassaline.

While Thieriot was thrilled with Chatwin’s prospects, she was concerned that he might not be ready for the Preliminary Challenge, held annually at The Spring Event at Woodside. This once-a-year competition is only open to horses and riders at the preliminary level, a level from which Chatwin was about to elevate. So if he and Thieriot were ever to compete in it, it would have to be this year. The rehabilitation goal for the medical team to meet was to have him ready for the Preliminary Challenge.

Since Chatwin was still fit enough to work out, and needed in order to continue competing, he was routinely lunged by the hospital staff while recuperating.

“I don’t really trust my horses with many other people,” said Thieriot. “The team at Davis was so fantastic, though, that I just knew they would do the right thing with him.”

Over the weeks, the wound got smaller and smaller. It grew less opaque, and was nearly healed after five weeks.

“I likened his vision to looking through lightly frosted glass,” said Dr. Lassaline. “Because he’s such a young and fit horse, the tissue will remodel to the point where it’s less and less cloudy over time.”

Dr. Lassaline was confident enough in Chatwin’s recovery and in Thieriot’s ability to continue to manage his rehabilitation (with the help of Dr. Burwell), that she discharged Chatwin in time to compete in the Preliminary Challenge, which he and Thieriot won. He also won the Galway Downs CCI 2-star national championship, as well as three other events post injury.

“I was honestly blown away by the care UC Davis gave Chatwin,” said Thieriot. “The experience I had with the Equine Ophthalmology Service made me confident in everything they do there, and made me want to go back for other things. UC Davis made me feel that Chatwin was being loved like I love him at home.”
Regenerative Medicine Laboratory Helping to Advance Therapies

It’s been nearly 10 years since a team of UC Davis veterinary clinicians and researchers first attempted regenerative medicine procedures on horses with injuries that were not healing by traditional medical means, or had no other treatment options for their conditions. Since then, regenerative medicine, more commonly referred to as stem cell therapy, is making great strides in the veterinary field. Focusing on utilizing healthy regenerative cells to repair tissue or organs, these techniques are helping racehorses return to competition, saving cats suffering from a debilitating oral disease, and aiding dogs stricken with arthritis.

The hospital’s Regenerative Medicine Laboratory (RML) provides adult-derived stem cell products for in-house applications, as well as for veterinarians around the world. Clinical applications include the treatment of tendon and cartilage injuries, bone regeneration, spinal cord injuries, as well as tendonitis and osteoarthritis.

The laboratory collaborates with the School of Veterinary Medicine’s newly launched Veterinary Institute of Regenerative Cures, the School of Medicine’s Institute for Regenerative Cures, and veterinarians and researchers from outside entities interested in advancing stem cell applications. Additionally, it is actively involved with Veterinary Center for Clinical Trials and also basic scientific research to develop alternate treatments and therapies for a wide range of naturally occurring veterinary diseases and injuries.

Featured Clinical Trial

Dr. Mary Lassaline is recruiting for a new clinical trial for Friesian horses diagnosed with bilateral corneal stromal loss (BCSL). The trial focuses on determining the incidence of BCSL in the breed and the mode of inheritance if a single gene is involved, and identifying candidate genes for further investigation. Owners are encouraged to enroll Friesian horses with and without the diagnosis of BCSL. For more information about this and other groundbreaking trials, visit www.vetmed.ucdavis.edu/clinicaltrials or email vetclintrials@ucdavis.edu

Brittany Elizondo, a RML technician, prepares stem cells for growth.