New Companion Animal Theriogenology Program Thriving

Over the past few years, the VMTH has added several faculty and resident clinicians to establish a dedicated Small Animal Theriogenology Service, boasting substantial experience in small animal reproductive medicine and surgery. Historically, the teaching hospital was unable to consistently offer the range of services it can now, such as ovulation timing, pregnancy monitoring, planned C-sections, and semen freezing. Breeders of merit are now able to have their pets evaluated for routine breeding management of male and female companion animals, infertility and other breeding problems, and emergencies.

This expansion of reproductive services was made possible, in part, by the implementation of a residency training program in companion animal theriogenology, thanks to the efforts of faculty mentors, Dr. Bruce Christensen, Dr. Autumn Davidson, and Dr. Ghislaine (Gigi) Dujovne to secure funding from the American Kennel Club and the Theriogenology Foundation. In August 2014, we welcomed the first UC Davis resident in companion animal theriogenology, Dr. Andrea Hesser into this intensive two-year residency program, which is one of only three companion animal-focused theriogenology training programs in the nation.

The addition of Dr. Hesser—who works under the tutelage of Drs. Christensen, Davidson and Dujovne—has allowed for substantial expansion of the Service, allowing our DVM students to gain more first-hand experience with reproductive issues in companion animals, while providing the highest level of breeding management services to our clients.

Some of this growth in patient numbers reflects the positive response to the inaugural Canine Breeder Excellence Seminar hosted by UC Davis in March 2014. More than 250 local canine breeders attended in person, with an additional 250 joining in via webinar. Building on that solid foundation, we are excited to present the 2nd Annual Canine Breeder Excellence Seminar at UC Davis on Sunday, March 29. More information on the seminar can be found at: www.theriofoundation.org/events.
Vanilla Bean, a 1-year-old female Burmese cat from Mill Valley, California, was diagnosed by her veterinarian with a rare congenital heart defect that does not allow blood to flow properly through the chambers. This improper flow can cause too much blood to collect in one chamber, create pressure and enlarge it. Thankfully for Vanilla Bean, her veterinarian referred her to the VMTH, where cardiologist Dr. Josh Stern was familiar with the condition, and the rare life-saving procedure to correct it.

Once at UC Davis, Dr. Stern and his team of residents, technicians and veterinary students evaluated Vanilla Bean by performing an echocardiogram (ultrasound of the heart) to assess the severity of her heart disease and to see if she was a good candidate for surgery.

Vanilla Bean's condition, known as a cor triatriatum sinister, and is found in children as well as cats. In his two previous surgeries to correct the condition, Dr. Stern collaborated with human cardiologists from Duke University, near where he was practicing at North Carolina State University. To help assist him now that he's at UC Davis, Dr. Stern sought out two cardiologists from the UC Davis Medical Center.

Together, the team of doctors began the delicate procedure of correcting Vanilla Bean's defect, which involved opening her chest cavity to expose the heart and utilize a hybrid cutting balloon dilatation. The balloon cuts the restricting membrane between the chambers to allow blood to flow through it regularly. The surgery was a success, and Vanilla Bean slowly recovered. She is no longer in congestive heart failure, and is off all medications.

Equine Specialists Ready for Foaling Season

To anyone in the horse world, spring means foaling season. The VMTH can be of assistance throughout the entire process, from management of the pregnant mare to delivery of the foal and provision of state-of-the-art postnatal care. Equine specialists are available 24/7 should any complications arise. Whether it is for high-risk pregnancies or pregnancies anticipated to be normal, the VMTH can keep a watchful eye on expecting mares to give owners peace of mind by providing a full range of foaling services of the highest quality.

Mares are personally monitored around the clock by a highly-trained veterinary technician staff, supplemented by video monitoring and the Foal-Alert™ system, allowing for veterinarians to immediately come to the scene.

Dr. Bruce Christensen and his team from the Equine Reproduction Service, along with Dr. Gary Magdesian and his team from the Equine Medicine Service monitor every case. Working together, they ensure the best care for the pregnant mare, as well as both mare and foal during and after the foaling event. Veterinarians from both Services are present for every foaling. Should any problems arise, the VMTH's board-certified surgeons and anesthesiologists are on call to assist with dystocias and C-sections.

Post-foaling complications are handled by the Equine Medical Emergency, Critical Care and Neonatology Service in the hospital’s world-class Lucy G. Whittier Neonatal Intensive Care Unit (NICU), headed by Dr. Magdesian,
Continuing Education Has Successful Year

The Center for Continuing Professional Education (CCPE) enjoyed a successful year of programs in 2014. With a total of 28 seminars and symposia held in locations locally, regionally, and internationally, CCPE provided much needed continuing education (CE) credits to hundreds of veterinarians and technicians.

A total of 867 veterinarians and 509 technicians benefitted from CE offerings through the UC Davis School of Veterinary Medicine. In California, veterinarians are required to complete 36 hours of CE every two years. Registered veterinary technicians in California are required to complete 20 hours of CE every two years. As the largest veterinary facility in California, UC Davis is proud to be able to offer so many different CE options for its colleagues.

Beyond providing CE credits to professionals, the events served 1,073 animal-owners and 529 students throughout the year. The seminars and symposia were taught by some of the finest clinician-scientists in the world – leaders in their particular fields of veterinary medicine.

Program hours in 2014 totaled 257, and 2015 promises to be just as successful, with 222 hours already scheduled. Examples of the courses included the Low Stress Cattle Handling Seminar (featuring Temple Grandin), the Canine Breeder Excellence Seminar, the Dangerous Dog Seminar, the Back to School Seminar, the International Conference on Feline Health, and the hugely popular Donkey Welfare Symposium.

Congratulations to CCPE Director Dr. Karl Jandrey and his team: Kate Tweddale, Roxie Rose, Maureen Phelan and Jan Harlan.

a board-certified critical care specialist. The NICU is equipped with customized stalls to support sick foals, allowing intensive management under the watchful eye of the mare in an adjoining stall.

Sick newborn foals are truly critical care patients because they can deteriorate very quickly and, if not treated early, can develop severe complications and die within a few hours. The NICU’s team is experienced in successfully handling post-birth complications that require the high-level intensive care a sick foal needs. The VMTH’s intensive care technicians provide around-the-clock monitoring, oxygen, IV fluids, IV antibiotics, nutritional support and all-important nursing care.

Critical conditions the NICU treats include sepsis, colic, diarrhea, neonatal maladjustment (dummy foal) syndrome, failure of passive transfer, NI (neonatal iserythroylosis), orthopedic problems (i.e. contracted tendons, crooked legs), prematurity, ruptured bladder, septic joints, and kidney or liver failure.

Additionally, post-foaling procedures performed by the NICU and reproduction team include: providing physical therapy for foals with leg deformities; evaluating the mare’s reproductive tract; treatment of retained placenta; and milking mares to bottle- or tube-feed their foals if the foal is unable to nurse.

The NICU has three mare/foal stalls, with ample overflow space into the nearby ICU ward. Whatever your need may be, the VMTH is here to help you welcome healthy foals into the world.
Intensive Care Unit Prepared for Most Critical Patients

When pets are critically ill, care provided by the most knowledgeable and skilled critical care veterinarians and technicians increases the likelihood of a successful outcome. The VMTH’s Intensive Care Unit has six specialists (four faculty and two staff veterinarians) board certified in emergency and critical care. One of the complex procedures for which they are specially trained is mechanical ventilation. In addition to these highly-skilled veterinary specialists, the ICU is also staffed with technicians who are trained to provide ventilator support as part of the comprehensive patient care services we offer.

One such recipient of that care is Ruby, a 9-year-old female French bulldog who spent Christmas and New Year’s in the ICU. She arrived at the VMTH a few days before Christmas in respiratory distress. Our critical care specialists placed her in an oxygen cage overnight and sedated her to keep her calm. Due to her distress becoming more severe overnight, Ruby needed to be placed on the mechanical ventilator. She remained on the ventilator for a week, and then remained hospitalized for another week until her lungs were functioning well enough for her to be released.

The VMTH was a pioneer in mechanical ventilation, having developed protocols for utilizing and enhancing this technology in companion animals and foals since the inception of the hospital more than 40 years ago. The hospital, which currently has four mechanical ventilators, continues to be at the forefront of mechanical ventilation, and likely uses the procedure on more critical patients than any other veterinary facility. Ventilator patients need to be carefully monitored around the clock, which requires a large team of technicians and veterinarians with advanced training in mechanical ventilation. Being the largest teaching hospital in the nation allows the VMTH to train and maintain such a dedicated team, which is difficult to accomplish in even the largest multi-specialty hospitals.

Ruby was treated on a mechanical ventilator in the ICU for more than a week.

Thanks and Praise from Grateful Clients

“Words can’t express our gratitude for the wonderful care the dentistry team provided for Rubi. We are so appreciative and have much to be thankful for.”

– Gennine H., San Mateo, California

“Many companies and organizations spend a lot of time training and promoting customer service but consistently fall short of their goal. In my opinion, your program is the model by which others should follow. Your teaching hospital and providers are the leaders in veterinary care, and I am most grateful that we found you in our time of need.”

– Karen N., Roseville, California

“I just wanted to say ‘Thank You’ to your entire staff at the Large Animal Clinic. Drs. Katzman, Sakai, and Barter did an amazing job on my mare CC. Also, technician Ramon Cervantes and student Liz Anderson were great.”

– Nannette S., Red Bluff, California

“I saw the video of your veterinarians saving Molly the cow from the mineshaft. I am so impressed with your team of professionals. It was just heartwarming...a great save, and a great story.”

– Chris M., Ben Lomond, California
Patient Care Staff Goes Above and Beyond

While the veterinarians are often credited with the outstanding patient care provided at the VMTH, none of it would be possible without the more than 200 members of the patient care staff. Providing the lion’s share of the day-to-day patient interaction, these technicians work around the clock to ensure the safety and well-being of the nearly 50,000 patients a year the hospital serves.

Patient care staff perform much of the monitoring and many of the treatments, feedings, groomings and walks required with each patient visit. They are at the forefront of monitoring patients throughout the day and night to make sure their stay at the VMTH is a happy, safe and healthy one. The staff is comprised of Registered Veterinary Technicians, Assistant Veterinary Technicians and Animal Health Technicians. Each has completed training programs and certifications to enable them to pursue their career paths in veterinary medicine.

Many members of the team have two- or four-year degrees in a designated area of animal science or veterinary patient care. Several are California Registered Veterinary Technicians and Veterinary Technician Specialists who are actively involved in providing continuing education to train others locally, nationally and internationally. All of the VMTH’s patient care staff must pass a rigorous on-going training program, and technicians must complete 20 hours of professional continuing education every two years to keep abreast of the latest advancements in veterinary medicine. Beyond caring for patients, the staff coaches, trains and monitors veterinary students and technician students in many aspects of patient care and paraveterinary techniques.

The patient care staff often forms close bonds with the patients, and the love and caring showered on the animals is greatly appreciated by their owners. The faculty and hospital administrators receive many letters from owners praising the quality of care provided by our technical staff.

Did You Know?

… that faculty and staff at the VMTH speak more than 20 foreign languages, including Mandarin, French, German, Spanish, Japanese, Korean, and many others?

… that the VMTH has the largest caseload of any veterinary teaching hospital in the United States, with nearly 50,000 patient visits per year?

… that because of the great treatment their dog Maki received from the Integrative Medicine Service and Dr. Jamie Peyton, as well as the great customer service they received from Theresa Varland, Junko and Peter made a donation to the Integrative Medicine Service in their honor after Maki’s passing?

… that it takes more than 340 highly-trained staff members (excluding veterinarians) to keep the VMTH functioning at an optimal performance level?
UC Davis Veterinarians Use Innovative Surgical Technique to Save Puppy with Liver Defect

Sandy, a 6-month-old female Labrador retriever, presented to the VMTH for evaluation and treatment of an intrahepatic portosystemic shunt (IHPSS). An IHPSS is a birth defect involving the blood vessels that normally bring blood to the liver for purification and removal of waste products.

Sandy was previously diagnosed with the IHPSS by her referring veterinarian, and Sandy’s vet suggested her owners bring her to UC Davis to see Dr. Bill Culp with the Soft Tissue Surgery Service. Sandy’s family made the 500 mile journey from their home near San Diego to see Dr. Culp, who has performed many shunt procedures.

Dr. Culp’s team got to work on Sandy, performing several diagnostics as part of their evaluation of Sandy’s IHPSS, including bloodwork, an abdominal ultrasound, a CT scan and a technetium nuclear medicine scan. All tests confirmed or were consistent with the presence of an IHPSS. The CT scan allowed visualization of the shunting vessel and helped with planning the best treatment approach. The goal of treatment for liver shunts is to close the shunting vessel over time, thus redirecting blood flow through the liver, allowing adequate nutrition to reach the liver, as well as removal of potentially toxic metabolic products from the systemic circulation.

Historically, the treatment options for IHPSS included medical management or an open surgery. The outcomes with these treatments were variable, and many dogs did not respond well. A newer Interventional Radiology technique, called percutaneous transvenous coil embolization (PTCE), performed in a minimally invasive fashion has recently shown great promise for the treatment of this disease. UC Davis is one of the few veterinary hospitals offering this state-of-the-art therapy, and is one of the worldwide leaders in Interventional Radiology. Dr. Culp and his team discussed the situation with Sandy’s owner, and it was decided that treating the shunt with PTCE was the best course of action.

Sandy was anesthetized and prepared for her procedure. During the PTCE procedure, a stent is placed through peripheral veins into the caudal vena cava (largest vein in the abdomen which returns deoxygenated blood to the heart) and directed along to the region of the shunt, allowing coils to be released into the shunt. These coils allow for clot formation which will gradually occlude the shunt vessel over time.

Sandy’s surgery was a success. She returned home, where she was put on strict orders to rest for two weeks. That included only going outside on a leash, no running, no jumping and no playing – a tall order for a 6-month-old puppy. Sandy’s family made sure she got her proper rest, as this improved Sandy’s chances of a successful outcome.

Sandy returned to the VMTH three months after her surgery, and passed her re-check examination with flying colors. Her owners reported that she was doing well at home with good activity levels and a good appetite. Her bloodwork showed improved liver values. A CT scan showed an improvement in liver size and vascularity demonstrating improved blood flow. Sandy’s initial response is very promising, and a full recovery is expected allowing Sandy to live a normal life.
Having a pet diagnosed with cancer is hard enough. Now, imagine if three of your pets were diagnosed with cancer. That’s exactly what Tricia and Mark Dewey of Suisun City, California faced with their cats recently. Luckily for the Deweys and their cats Sasha, Minka and Cinco, one of the best veterinary oncology treatment centers in the country was only 25 miles from their home. Over the past year, the Deweys and their cats have become very familiar with the VMTH’s Oncology Service.

Sasha, a 13-year-old female purebred Abyssinian, developed an injection-site sarcoma that forced her right front leg to be amputated. Following the amputation—performed by the VMTH’s Soft Tissue Surgery Service—she underwent a rigorous treatment plan of radiation therapy in the VMTH’s state-of-the-art linear accelerator. To complete the therapy, Sasha was required to be anesthetized for 18 treatments on nearly a daily basis. Following radiation, Sasha completed four rounds of chemotherapy on a monthly basis. She is now cancer free, and is monitored regularly to ensure no recurrence or metastasis.

Minka, a 15-year-old female purebred Siberian, was diagnosed with renal lymphoma. She is currently undergoing chemotherapy at the VMTH. She has completed eight weekly treatments. Her sweet, docile nature has made her popular with her oncology team members. Minka continues to courageously battle her lymphoma.

Cinco, an 11-year-old male domestic shorthair, developed glaucoma in the last few years, causing him to go blind. An ophthalmologist discovered a tumor behind his right eye, and removed the tumor along with the eye. After removal, a biopsy on the tumor revealed lymphoma, so the Deweys decided to have him evaluated by the oncologists at UC Davis. Although no evidence of metastasis was found, chemotherapy was initially recommended, but because Cinco is also diabetic, it was decided not to pursue chemotherapy. Instead, Cinco is examined every three months at the VMTH to make sure no signs of recurrence or metastasis are present. Cinco has passed every re-check so far. He has since had his left eye removed also, due to recurrent infections.

As evidenced by the Dewey’s cats, cancer in pets can come in many different forms, and treatments can also vary greatly. The oncology team will help clients decide on treatment plans that work best for them and their pets. The patient’s quality of life is always the central focus of any treatment plan developed.

“Everyone at the VMTH has been wonderful,” said Tricia. “Mark and I continue to be grateful to have access to such great care for our cats.”

The Oncology Service collaborates extensively with fellow clinical researchers at the UC Davis Medical Center and the worldwide oncology community to develop safer and more effective treatments that lead to new advancements in treatment for both veterinary and human patients. Being part of one of the largest veterinary teaching hospitals in the world, as well as part of one the nation’s premier research universities, allows the Oncology Service to bring the newest advances to its patients. The VMTH is able to provide the most comprehensive range of oncology specialties available at one location.
Welcome to the January/February issue of VMTH Heartbeat. As you can see in this issue, inspiring patient care stories continually emerge from the VMTH. We are routinely sent notes of gratitude from clients praising our faculty, staff, house officers and students. These expressions of gratitude are truly uplifting for our technicians, clinicians and students who invest so much time, energy, expertise and compassion into each case. The stories featured here are just a few examples of why I am so proud to lead such an incredibly talented team.

Perhaps you have read about One Health in our publications. Essentially, One Health embodies the concept that animals, people and the environment all impact each other and we, as a healthcare community, can work together to solve complex problems that impact all of us. One of the avenues to achieve this goal is for veterinarians and physicians to collaborate on research and/or clinical activities directed at diseases and conditions that affect both animals and humans. I am so pleased to see our cardiologists and surgeons teaming up with physicians from the UC Davis Medical Center to treat one of our patients. It is my understanding that this was the first time those physicians visited the VMTH, and they were extremely impressed with our facility.

I hope you enjoy this issue. As always, please let us know what you think.

Regards,

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

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**Featured Clinical Trial**

Dr. Sara Thomasy is recruiting for a new clinical trial to identify the genetic components of Spontaneous Chronic Corneal Epithelial Defect (SCCED) in boxers. Owners are encouraged to enroll their boxer dogs if the dog 1) is over 8 years old and has never had corneal ulcers; or 2) has or has had SCCED. For more information on this and other groundbreaking clinical trials, visit www.vetmed.ucdavis.edu/clinicaltrials or email vetclintrials@ucdavis.edu.

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**CE Calendar**

**Veterinary Continuing Education**

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

**Upcoming Veterinary Continuing Education Events:**

- **February 28**  Behavior Symposium – UC Davis
- **March 28-29**  Winter Conference – UC Davis
- **April 11-12**  Wildlife and Exotic Animal Symposium – UC Davis
- **April 13**  Morris Lecture – UC Davis

For more information on these and other upcoming CE events, please visit [www.vetmed.ucdavis.edu/ce](http://www.vetmed.ucdavis.edu/ce).

Also, please join us for the 37th Annual Gerald V. Ling House Officer Seminar Day on March 20.