Several members of the VMTH are attending the 60th Annual American Association of Equine Practitioners Convention & Trade Show, held this December in Salt Lake City. With hundreds of informative and educational presentations, the AAEP convention is the largest gathering of equine veterinarians in the world. The convention allows equine clinicians, technicians, students and administrators to gather and share the depth and breadth of their expertise across the entire spectrum of equine medicine.

Making presentations at this year’s convention are Drs. Monica Aleman, Travis Henry, Laszlo Hunyadi, Heather Knych, Nicola Pusterla, Sharon Spier, Mathieu Spriet, Betsy Vaughan and Mary Beth Whitcomb, as well as recently departed residents, Diane Rhodes and Elsbeth Swain. Their presentations cover topics such as pigeon fever, equine influenza, ultrasound, business management, auditory loss, equine herpesvirus-1, equine protozoal myeloencephalitis (EPM) and much more. Current and former faculty, residents and students also serve the AAEP on committees, in leadership roles and in many other ways.

A highlight of the convention for UC Davis will be Dr. John Madigan’s presentation of “Gumshoe Sleuthing in the World of Infectious Disease and Neonatology: Discoveries That Changed Equine and Human Health” at this year’s Milne Lecture. Named after AAEP past President Frank J. Milne, the Milne Lecture is a hallmark tradition at the convention, drawing thousands of spectators. Being named the Milne lecturer is a prestigious honor.

The VMTH is also marketing its services with a booth at the convention’s trade show. The hospital is highlighting the IFAT laboratory test for EPM, developed and validated at UC Davis by a multi-disciplinary research team led by Dr. Pat Conrad. Also available in the booth will be a flow chart to help veterinarians properly diagnose EPM cases. Joining Dr. Conrad in helping to market the hospital will be: VMTH Director Dr. David Wilson, Center for Equine Health Director Dr. Claudia Sonder, VMTH Clinical Laboratory Services Research and Development Manager Danielle Carrade Holt, PhD, and VMTH Communications and Marketing Officer Rob Warren.
Laser Treatments Increase Equine Ophthalmology Offerings

The VMTH recently acquired equipment that has increased its service offerings for equine ophthalmology patients. The semiconductor diode laser device allows ophthalmologists to perform new treatments on horses’ eyes, including cyst removal and glaucoma treatment. These procedures have been successful for human and animal patients, and now are available at UC Davis for use in horses the first time.

Horses can develop cysts from their iris for no known reason. If left untreated, these cysts can grow and may cause irritation to the horse or become visually obstructive. Horses are also known to become “spooked” by seeing the cyst in their field of vision. Removal of cysts is now a one-time, outpatient procedure. The laser simply “zaps” the cyst multiple times until it creates a hole causing the cyst to rupture and deflate, without damaging other vital structures in the eye. After care is generally a short course of topical anti-inflammatory ointment for no more than a week.

More importantly for horses, the laser can also be used to treat glaucoma, an increase in pressure inside of the eye. This increased pressure, if left untreated, eventually destroys the retina and optic nerve, and ultimately causes blindness. Glaucoma occurs due to an inability of fluid (aqueous humor) to drain from inside the eye, most commonly secondary to chronic intraocular inflammation known as equine recurrent uveitis (ERU) or “moon blindness.” ERU is a disease that is very prevalent in horses.

The laser treatment for glaucoma is known as transscleral cyclophotocoagulation (TSCP), and destroys part of the ciliary body which produces the aqueous humor that contributes to the increased pressure. TSCP treatment destroys just enough of the ciliary body to lower the production of aqueous fluid to a point that reduces the intraocular pressure, but not enough to completely stop the production, which the eye needs to remain healthy.

VMTH Exotics Clinician Teaches Veterinary Colleagues in Costa Rica

Dr. David Guzman, of the Companion Exotic Animal Medicine & Surgery Service, recently traveled to Costa Rica to teach avian medicine and surgery to veterinarians pursuing a Conservation Medicine Master’s degree taught at the National University of Costa Rica. Dr. Guzman spent one week at the Central American school, assisting with the program that focuses on treatment of wild animals.

While in Costa Rica, Dr. Guzman taught avian clinical techniques, anesthesia and analgesia, soft-tissue surgery, avian orthopedics, and avian endoscopy. Beyond his on-site clinical activities, his teaching duties also included an online diagnostic imaging course for birds, reptiles and small mammals. The opportunity to host someone with Dr. Guzman’s level of expertise is rare in Costa Rica, as the country does not have any specialists in zoological medicine. Being a native Spanish speaker, he was highly sought after for this assignment.

Dr. Guzman also made a trip to the university two years ago, as the program is taught every other year. He hopes to continue that relationship, as well as several research collaborations with the school, one of which focuses on the health assessment of toucans in captivity in Costa Rica and the development of hematological and chemistry reference values for toucans.

National University is considered one of the most prestigious universities in Costa Rica. It has a strong curriculum in agricultural, environmental, natural, and health sciences, which includes a School of Veterinary Medicine.
As a part of the Equine Integrative Sports Medicine Service at the VMTH, acupuncture is becoming an increasingly popular treatment option for horses when Western medicine may not be entirely effective, such as treating back and neck pain. Led by Dr. Sarah le Jeune, the Service has been offering the complementary procedure for several years with increasing success rates.

Acupuncture has been used to treat various medical conditions in humans and animals for more than 3,000 years. Horses were among the first animals treated with acupuncture due to their importance in warfare and farming. An equine surgeon, Dr. le Jeune was one of the first to regularly incorporate acupuncture into her practice. Acupuncture and other traditional Chinese veterinary medicine procedures can easily be integrated into conventional diagnostic and treatment modalities to optimize clinical outcome. The use of acupuncture for pain relief is well supported and elucidated by modern research studies.

Dr. Sarah le Jeune’s acupuncture treatments have proven to be quite a benefit to some VMTH patients.

Dr. le Jeune has completed a multitude of post graduate work in equine acupuncture and sports medicine. She studied acupuncture at the Chi Institute in Gainesville, Florida and is a Certified Veterinary Acupuncturist. Dr. le Jeune is also a Certified Veterinary Chiropractor and is board certified in surgery as well as sports medicine and rehabilitation.

The accepted importance of acupuncture as part of a treatment plan, and the increase in interested clients has played a part in enabling the VMTH to add an advanced training program in equine integrative medicine. Dr. Jodie Daglish recently joined the Service for a year-long fellowship to study under Dr. le Jeune and other equine faculty members.

In addition to acupuncture, the Service is directed towards sports medicine and lameness. It incorporates routine lameness work-ups, diagnostics and treatments, in addition to complementary modalities including chiropractic, saddle fit, laser therapy and rehabilitation.

When it comes to equine infectious diseases, the VMTH is fortunate to have on its faculty one of veterinary medicine’s leading experts in the field. Dr. Nicola Pusterla has devoted the majority of his 20-year career to the discipline. His research focuses on selected aspects of diseases with an emphasis on epidemiology, clinical disease understanding, diagnostics, prevention, and treatment. He has become one of the foremost authorities in the world on many facets of the broad subject of equine infectious disease.

Dr. Pusterla’s clinical experience allows him a first-hand look at some of the most concerning aspects of these diseases in horses, including how they change patterns and how viruses skirt immunity induced by vaccination.

As these infectious diseases continue to plague the equine world, a team approach is what is needed to combat these diseases, explained Pusterla. Not just with academic colleagues, but also staying connected with the equine industry to tackle these pertinent issues.

One of the most challenging aspects of his work is getting to outbreaks early enough to collect samples for studies, but with the help of technological advancements, the school’s Center for Equine Health and the multitude of research opportunities, they are gaining a better understanding of the immune system of horses and continually making progress toward best practices for diagnosing, treating and preventing these diseases.

Dr. Nicola Pusterla is often called upon by the media to provide expert analysis of equine-related news stories.

Dr. Nicola Pusterla is a UC Davis veterinarian.
For veterinarians who want to pursue advanced training in order to specialize in a particular area of veterinary medicine, the VMTH offers the largest clinical training program of any veterinary hospital. The House Officer Program currently offers 106 internships, fellowships and residencies in 34 specialty disciplines. Internships and fellowships usually last one year, but most house officers pursue residencies that last three or four years.

During the program, these veterinarians (under the tutelage of faculty specialists) work as practicing clinicians in the VMTH, and see hundreds, if not thousands, of patients during the course of their training. Following successful completion of a residency, veterinarians will then take a rigorous examination to become board certified in their specialty. “American Colleges” of particular fields of veterinary medicine conduct the examinations, and those who pass are deemed Diplomates of that college.

Every year, former VMTH residents take the examinations and pass at a rate well above the national average. This year, the VMTH welcomed more than two dozen new Diplomates into its training program alumni.

The high quality of VMTH training programs, and how they correlate to board certifications, can clearly be seen in the success rate of residents who take credentialing examinations. Four VMTH residents took this year’s board examination for the American College of Zoological Medicine, and all four passed. Typical pass rates for that examination range from 30-50 percent. This high success rate is seen throughout the VMTH’s range of specialties. The Diagnostic Imaging Residency Program boasts a 100% board certification examination pass rate over the past 20 years, and all former residents from that time period are still currently employed as veterinary specialist radiologists.

Thanks and Praise from Grateful Clients and Veterinarians

“Being immersed in an academic setting again was so revitalizing. The expertise and techniques shared by all the clinicians and residents (in the Don Low Fellowship) was truly appreciated and useful, and has had a direct and positive influence on my own practice.”
– Dr. Kris D., Davis, California

“Thank you (to the Client Services staff). I appreciate your quick response. My family is so thankful that UC Davis is there when we need them.”
– Sharon S., Clovis, California

“Thanks to Sue’s indomitable nature and to the incredible medical professionals at UC Davis, she continues to live a quality, largely healthy life as she approaches her 14th birthday.”
– Alan D., Vallejo, California

“Ougie and I would like to thank Dr. Lynelle Johnson and student Amy Zide for the awesome care they gave us while we were searching for a solution to Ougie’s breathing issues. Their dedication to finding the cause and their direction to get him healthy was amazing.”
– Michelle B., Windsor, California

“There’s ‘something about (coming back to) Davis’ for me that helps me kind of ‘reset’ my life, and the Fall Continuing Education Symposium was one of those conferences. Even though it’s not in my field, the lectures about radiology of marine animals and reflections about large animal practice taught me a lot.”
– Dr. Kerry G., Beaverton, Oregon
Dr. Bev Sturges Wins Faculty Clinical Excellence Award

Dr. Bev Sturges was recently named the winner of the 2014 Faculty Clinical Excellence Award in recognition of her exceptional commitment to patient care and client service, outstanding clinical instruction and training of DVM students and residents, her clinical expertise and her achievements in advancing the discipline of neurology and neurosurgery. Dr. Sturges’ significant clinical commitment has made the Neurology and Neurosurgery Service one of the busiest services at the VMTH.

Faculty colleagues, students and residents have described Dr. Sturges as creative in the operating room, with amazing skills and accuracy. She is recognized not only for her expertise, but for her investment in teaching veterinary students and young specialists to excel in their chosen fields of professional interest. As a teacher and mentor, she expects her students to be focused, work hard and be dedicated to providing outstanding patient care. Dr. Sturges is also viewed as compassionate and very much in-tune with the client concerns.

Dr. Sturges’ clinical research in intracranial and spinal neurosurgery and stem cell therapy for brain and spinal cord injuries has not only advanced the care of animals but is also contributing to advances in human medicine. She is extremely well respected at the state, national and international level for her expertise in clinical neurology and neurosurgery, and has been described as one of the premier neurosurgeons in veterinary medicine.

Dr. Sturges is the inaugural winner of the Faculty Award for Clinical Excellence. The award was established to honor professorial or staff veterinarians at the VMTH who demonstrate exceptional, sustained, and significant achievements in patient care, clinical instruction, and advancing clinical veterinary medicine. It recognizes veterinarians whose ability, dedication, character, and leadership contribute significantly to the excellent reputation of VMTH clinical programs.

Did You Know?

… that the VMTH recently had a presence at the UC Davis Horse Day? Drs. Sharon Spier and John Madigan gave presentations on pigeon fever and trailer accident emergencies, respectively. Also, thanks go to Dr. Spier, Dr. Julie Dechant, Dr. Tania Kozikowski, Danielle Carrade-Holt, PhD, and Rob Warren for promoting the hospital with a popular vendor booth at the event.

… that Dr. Melissa Bain, chief of the Behavior Service, recently became board certified by the American College of Animal Welfare?

… that Michelle Hirschinger is the new after-hours Client Services supervisor?

… that Laura Doran is the new manager of Client Services in the Large Animal Clinic?

… that the Dentistry and Oral Surgery Service (DOSS) recently celebrated the retirement of two important contributors to their service? Over the years, Craig Cornell, RVT, VTS, provided tremendous anesthesia support in the Dental Operatory, while Diane Naydan, as an immunohistochemist in PMI, greatly contributed to DOSS’ research program. The group celebrated the retirements over a crab dinner.

Dr. John Madigan’s presentation on roadside emergencies was a big draw at the 2014 UC Davis Horse Day.
Ragan, an 8-year-old Irish terrier, was suffering from immune-mediated thrombocytopenia (ITP) when she was brought to the emergency room at the VMTH. ITP caused Ragan’s immune system to destroy the platelets in her blood, which meant her blood was unable to clot. Something as simple as a bump or a bruise could cause Ragan to internally bleed to death. First diagnosed with ITP five years earlier, Ragan had been hospitalized a few times before when her platelet count went down to zero. Thankfully, her condition had been managed with medication until this relapse.

When Ragan presented to the Emergency Service, she was not alert, was bleeding from the nose and had bloody diarrhea. Her red blood cell (which carry oxygen) count was only 19 percent (normal is 35-40 percent), and zero platelets could be seen microscopically. Her white blood cell (which make up the blood’s immune system) count was also discovered to be extremely low. Lacking three of the four blood components (platelets, red cells, white cells), essentially all that was remaining in Ragan’s bloodstream was the fourth component – plasma. Her blood cells had become nonfunctioning.

After being stabilized by the emergency veterinarians, Ragan was transferred to the specialists in Internal Medicine, who worked with the hospital’s Transfusion Medicine Service to handle her fragile condition. Ragan was treated with a variety of medications and procedures, including numerous blood and platelet transfusions, immunosuppressives, darbepoetin (to promote red blood cell growth), neupogen (to promote white blood cell growth), gastro-protectants, and antibiotics. Luckily for Ragan, the VMTH operates the largest veterinary blood bank in the western United States. Ragan's multiple transfusions were swiftly performed with blood from the hospital's local canine donor base. Several times a week, locally-owned dogs visit the hospital to donate blood. The blood is then processed and stored in an extensive on-site bank, allowing the VMTH to perform more than 600 transfusions per year.

Due to Ragan's fragile condition, and her need to stay in a clean controlled environment, she remained hospitalized at the VMTH for 48 days. Beyond the bloodwork and transfusions, she also had her spleen removed in hopes of managing her ITP, and also suffered from pancreatitis and three episodes of sepsis, which nearly caused her to die. Being the largest veterinary teaching hospital in the world, the VMTH was well prepared to handle all of Ragan’s complications. UC Davis veterinarians, technicians and staff were amazed at Ragan’s determination to survive.

Eight months after her hospitalization, Ragan’s recovery has been stellar. Now 9-years-old, she is vibrant and healthy once again. According to her family, Ragan has “lots of energy and is running around, acting like a puppy. We can’t thank the doctors and technicians enough for saving her life.”
UC Davis Determines Illness Affecting Horse for Years

When Mudpie, a 17-year-old mustang mare, presented to the UC Davis Veterinary Medical Teaching Hospital, her owner and veterinarians weren’t exactly sure what was wrong with her. She suffered a shoulder injury three years prior, as well as what appeared to be a hip injury or suspected broken pelvis. After several months rest, she seemed to be on the mend.

Although Mudpie was able to be ridden again, she had intermittent relapses of lameness of the left hind limb. Just a few weeks before coming to UC Davis, though, Mudpie re-injured that limb and was also kicked in the same area. Her lameness worsened, so her owners decided it was time to have Mudpie examined by the specialists at the VMTH.

Once at UC Davis, Mudpie was given physical, lameness and neurologic examinations. Veterinarians in the Equine Medicine Service noticed swelling in her hind limbs and some minor lameness. They attributed the swelling to the kick sustained a week earlier, and the lameness to her previous injuries. Neither were of too much concern to the veterinarians and didn’t appear to be the cause of her more serious issues. The neurologic examination was a different story, though.

While there was a chance that Mudpie’s condition could have an orthopedic component, UC Davis specialists—including a board-certified neurologist—thought that the neurologic findings were the likely cause of her problems. They suspected Mudpie could be suffering from a number of ailments, including arthritis along her spine, neoplasia (the formation of a tumor), fungal infection or equine protozoal myeloencephalitis (EPM).

EPM is a debilitating neurologic disease in horses caused by the ingestion of a protozoa. Equine researchers have determined that the host of that protozoa is the opossum, which sheds it in its feces. To determine if a horse has EPM, veterinarians can test its blood to see if the horse has developed antibodies to the protozoa. The greater the antibody response, the more likely the horse has been exposed to or infected with the protozoa that causes EPM.

Mudpie’s blood antibody titer (the measurement of antibodies she produced) was off the charts of EPM indication. Any number above 80 on the particular test performed on Mudpie is indicative of being EPM positive. Samples are tested to an endpoint titer of 2,560 because any value beyond that point is obviously indicative of EPM. Mudpie’s results had reached that threshold. There was no doubt that Mudpie had EPM.

She was immediately started on ponazuril, an anti-protozoal drug, as well as an anti-inflammatory drug for the swelling in her hind limbs. It was also recommended that Mudpie’s food be kept off the ground or in a container, and that precautions be made to keep wildlife, especially opossums, off the property.

Mudpie returned to the VMTH a month later for another EPM test. Her titer had decreased to 320. Now nearly a year later, her titers remain at an EPM-positive level, but her owner reports a dramatic improvement in her condition. UC Davis veterinarians aren’t necessarily surprised that the titer levels remain positive. Titers may remain high for long periods of time despite improvement or resolution of clinical signs, and horses can get re-exposed or re-infected. Mudpie’s last examination at UC Davis by a board-certified neurologist showed marked improvement, from “moderate/severe” signs on her initial presentation, to “mild” signs not noticeable to the untrained eye on her last examination.

Mudpie’s owners are pleased that they are able to ride her again, and that her condition continues to improve.

“For the longest time, we just thought that Mudpie would get better on her own,” said her owner. “But her condition kept going back and forth between getting better and then getting worse again. We’re so happy that we finally got the proper diagnosis of her condition. We wish we had come to UC Davis much sooner.”
From The Director’s Corner

Welcome to the November/December issue of VMTH Heartbeat. As the holidays are already upon us, I hope all of you will find time to celebrate with family and friends and make the season a memorable, relaxing and enjoyable one. With everyone’s schedules getting increasingly busy, I encourage all of you to make the most of your time off in the weeks ahead.

I am pleased to see our equine services prominently highlighted in this issue. At the time of publication, I will be traveling with many VMTH colleagues to the American Association of Equine Practitioners Convention & Trade Show in Salt Lake City. The hospital always has a strong presence at the annual AAEP convention, as we share our clinical expertise and new research discoveries with equine veterinarians from around the world.

I’d like to thank all of the faculty and staff who keep the VMTH running on a daily basis so that we can provide exceptional patient care and service. Their hard work has enabled us to log another successful and memorable calendar year. I look forward to seeing what new innovations they have in store for our clients, their animals and the profession in 2015.

Regards,

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

Featured Clinical Trial

Dr. Stephen White is recruiting for a new clinical trial to find a treatment for dogs with pemphigus foliaceus (PF). Dogs above 15 pounds are encouraged to enroll if they are suspected of having or have been previously diagnosed with PF that are naïve to treatment or diagnosed with PF but have failed to improve with standard treatment. For more information on this and other 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:
- December 3-7 Explorer Series – Costa Rica
- January 10-11 Livestock Symposium – UC Davis
- January 23-25 Multidisciplinary Advanced Therapies Symposium: Clinical Oncology – Napa, CA
- January 31 Heumphreus Memorial Lecture – UC Davis

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

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