Welcome to our annual State of the VMTH issue. We devote this entire issue to bringing you highlights of activities and accomplishments in the many Services that comprise the UC Davis Veterinary Medical Teaching Hospital. These accomplishments showcase the dedication and breadth of talent of our faculty, staff, house officers and students, who combine forces every day to provide top-notch patient care and client service in one of the most advanced and busiest veterinary teaching hospitals in the world.

Once again, our overall caseload continued to increase in 2014-15, totaling 51,438 patient visits for the year. This all-time high marks a 6 percent increase in our overall caseload (6.9 percent in small animal, 3 percent in large animal, and 3 percent in external ambulatory visit), and is a testament to the hard work and commitment of our clinicians, staff and students. The many faces that make up the VMTH continue to be here 24 hours a day, 365 days a year to care for our community’s animals. From our dedicated client services staff who tirelessly facilitate every one of those visits to our highly skilled technical staff who care for animals around the clock, VMTH veterinarians are supported by an amazing team that keeps the hospital functioning at an extraordinary level.

As a teaching hospital, one of our primary missions is to educate current and future veterinarians to be successful and become leaders in their chosen fields. Our house officer program, the largest of any veterinary hospital, trained 109 residents, interns and fellows in 34 specialty disciplines during the past year. The 136 students in the DVM Class of 2015 spent their 4th year of veterinary school on a 59-week clinical rotation through the hospital’s many Services, getting hands-on training from some of the top veterinary professionals in their respective fields. Additionally, more than 120 board-certified faculty and staff veterinarians, as well as nearly 350 highly-trained staff members rounded out the make-up of the VMTH. In total, that’s more than 700 people dedicated to advancing the health of animals!

As I end my 8-year tenure as hospital director and transition into my new position of director of Veterinary Medical Center Facilities Planning, I am very proud to see the VMTH excelling on so many levels. I am also delighted that Dr. Jane Sykes has agreed to take on the role of interim director to lead the continual advancement of the hospital as it writes the next chapter in its storied history. I am certain that Jane will do a superb job in leading our faculty and staff to even loftier heights, as they continue to set the standard for excellence in clinical veterinary medicine and education. As for me, I am excited to lead the charge in planning and raising public awareness of the new Veterinary Medical Center, which will update and expand on our state-of-the-art clinical facilities befitting our #1 world ranking in academic veterinary medicine, and allow us to accomplish our vision for the future. Thank you for all the support and hard work over the years, and I wish you all the best in your future endeavors. Exciting times lay ahead.

Regards,

Dr. W. David Wilson, BVMS, MS, HonDACVIM
Director, VMTH
Behavior

- Dr. Melissa Bain passed her board exam and became credentialed by the American College of Animal Welfare, a new American Veterinary Medical Association specialty.
- Dr. Liz Stelow passed her board exam and became credentialed by the American College of Veterinary Behaviorists.
- House Officer Dr. Karen van Haaften completed the first year of her residency, one of very few behavior residency training programs in the country.
- Michelle Borchardt, RVT, completed her demanding 9-month Karen Pryor Academy certification, and joined the most elite group of positive reinforcement trainers in the country.

Information Technology

- Merger of the VMTH and SVM IT units was completed to form one centralized unit that serves the IT needs of the entire school. A single helpdesk system was created and a project prioritization and tracking system was launched.
- Completed information system improvements for veterinary pharmacy dispensation at UC Veterinary Medical Center San Diego’s new San Marcos extension.
- A new referring veterinarian solution was implemented to deliver discharge instructions and visit summaries via email or fax to both the referring veterinarian and primary care provider after a patient is discharged from the VMTH.
- Installed an 88-inch digital touchscreen monitor in the hospital lobby that proudly displays the members of the school’s Heritage Society for Animals. Society members are listed in grateful appreciation of their generous assistance with our mission to improve the well-being of all animals.
- Utility improvements to the school’s server room infrastructure were made, including improved network speed, equipment protection, and backup capabilities.

Anatomic Pathology

- Began developing digital pathology, which will enhance the hospital’s ability to interact remotely, and more accurately assess morphometrics of tissues.
- Dr. Elise LaDouceur was nominated for the American Association of Veterinary Clinicians National Resident Award.
- Several Pathology members won “best poster” awards at the American College of Veterinary Pathologists annual meeting. Vivian Chen: 1st place experimental pathology; Patty Gaffney: 1st place natural diseases; Andrew Cartoceti: 2nd place natural diseases; and Terza Brostoff: 1st place student poster.
- Ten Pathology residents passed the first portion of the American College of Veterinary Pathologists board exam.
- Participated in the West Coast Veterinary Pathology Conference, one of the most academically focused regional meetings in veterinary pathology.
- Developed new techniques for global gene probes for infectious diseases.

Community Practice

- Hosted the Primary Care Veterinary Educators International Symposium. Primary care veterinarians from all of the U.S. veterinary colleges, as well as Canadian and international schools attended to receive advanced training in teaching veterinary students in the clinical setting.
- Dr. Julie Meadows was one of three veterinarians invited to participate in the development of an interdisciplinary pain management module, a project in collaboration with the UC Davis School of Medicine and the School of Nursing.
- The Service and its facility became certified as “Feline Friendly” by the American Association of Feline Practitioners.
- Drs. Tami Pierce and Julie Meadows worked with colleagues at Texas A&M University to develop the first computer-based primary care education module for student learning.

“I am honored to be named interim director of the UC Davis veterinary hospital. This is an exciting time at UC Davis, as we lay the groundwork for a new Veterinary Medical Center to come about in the near future. Enjoy these accomplishments that we’ve been able to achieve over the past year, and thank you for helping us continue to reach new heights in veterinary medicine.”

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

Learn more about Dr. Sykes and her appointment as interim director of the VMTH in the next issue of Heartbeat.
Dr. Julie Meadows visited Nanjing Agricultural University in China and demonstrated primary care techniques and communication skills to Chinese veterinarians.

The puppy socialization class, Yappy Hour, had record attendance and continued to garner positive reviews from clients and the media.

Faculty members volunteered to mentor students working at the Knights Landing Clinic, a student-run group that provides general wellness examinations to animals in an economically underserved community near campus.

Dentistry and Oral Surgery

The regenerative clinical and research program in collaboration with the Biomedical Engineering Department continued to expand and draw national media attention. The mandibular reconstruction program in dogs expanded to include bilateral rostral mandibulectomy, segmental mandibulectomy and defect non-union cases.

Collaboration with the Biomedical Engineering Department continued, and the use of 3D printing of skulls for the treatment planning of challenging maxillofacial cases became an integral part of the Service.

Began the use of cone-beam computed tomography as a routine procedure for advanced diagnostic imaging of dental, maxillofacial and temporomandibular joint disorders in dogs, cats and rabbits.

Eight full-length publications based on VMTH clinical case material were published in top-notch journals and covered topics in oral pathology, oral surgery and oral diagnostic imaging.

Several clinical trials involving mesenchymal stem cells for the treatment of chronic stomatitis in cats continued with some findings already published in a high-tier journal.

Collaborative research continued with the California Academy of Sciences and the Marine Mammal Center, resulting in six publications over the past year.

Anesthesiology

Anesthetized approximately 3,900 small animal patients and 630 large animal patients.

Members of the Service published 17 research manuscripts on anesthesia and pain management.

- Dr. Peter Pascoe continued his work on avian anesthesia and humane euthanasia.
- Dr. Linda Barter continued her work on rabbit anesthesia.
- Dr. Alonso Guedes continued his work on pain management and treatment of laminitis in horses.
- Dr. Robert Brosnan continued his work on inhalant anesthetics and anesthetic management in horses.
- Dr. Bruno Pypendop continued his work on anesthesia and pain management in cats.

The Service continued to provide state-of-the-art anesthetic and pain management, such as the introduction of ultrasound guidance for regional anesthesia.

Claudia Navarro, a Registered Veterinary Technician in the Service, passed the Veterinary Technician Specialist examination in anesthesia, given by the Academy of Veterinary Technician Anesthetists.

Supported the efforts of other Services to expand the frontiers of their clinical disciplines by providing special anesthetic techniques.

Clinical Pathology and Laboratory Services

Collaborated with the Equine Medicine Service to create and promote the Equine Protozoal Myeloencephalitis (EPM) website.

Laboratory Services attended the American Association of Equine Practitioners Convention to promote the hospital’s exclusive EPM testing, helping SarcoFluor™ EPM submissions increase 29 percent and NeoFluor™ EPM submissions increase 33 percent for the year.

Laboratory Services instituted a new reduced price shipping program to veterinarians, allowing for easier submission to the laboratories from referring veterinarians from anywhere in the U.S.

Increased new research studies by 60 percent, from 39 studies to 62. In total, there are currently 96 ongoing and active research studies, which is a record number for the laboratories.

Laboratory Manager Julie Burges won a UC Davis Staff Assembly Citation of Excellence Honorable Mention for Supervision.

Eileen Samitz (Microbiology Laboratory) won the Rachel Smith Award, the hospital’s highest staff recognition.

Implemented a new searchable test database on the Clinical Laboratory website for outside clients, making it easier to navigate and display test availability.

Drs. Andrew Burton and Connie Wu achieved American College of Veterinary Pathologists board certification in Clinical Pathology.

Dr. Andrew Burton won the Gerald V. Ling Award at House Officer Seminar Day. His research presentation was titled “Enumeration and Sizing of Erythrocyte Microparticles in Canine Packed Red Blood Cell Units.”

Dr. Dori Borjesson won the 2014 Zoetis Excellence in Research Award, recognized for the exceptional quality and productivity of her research efforts in regenerative medicine.
Equine Medicine (Field Service; Medical Emergency, Critical Care and Neonatology; Internal Medicine; Dentistry)
- Dr. Monica Aleman achieved board certification in the American College of Veterinary Internal Medicine in the sub-specialty of Neurology.
- Dr. John Madigan's “squeeze technique” to treat neonatal maladjustment syndrome, which may have a connection to autism, was featured in hundreds of publications throughout the world and the YouTube video of the story was viewed more than 250,000 times.
- Dr. Joie Watson, of the Equine Field Service, won the 2014 SVM Faculty Distinguished Teaching Award.
- Dr. Travis Henry passed the written examination for board certification in the American College of Veterinary Dentistry.
- Increased caseload in various specialty areas of Equine Medicine, including Neonatology, Neurology, and Dentistry.
- Dr. Sharon Spier, section head of the Equine Field Service, won the 2015 Outstanding Alumni Award from her alma mater, Texas A&M University.
- Several faculty members (Drs. Monica Aleman, Krista Estell, John Madigan, and Nicola Pusterla) and past or current residents (Drs. Laszlo Hunyadi, Jamie Prutton, Diane Rhodes, and Elsbeth Swain) presented their research at the American College of Veterinary Internal Medicine Conference and the American Association of Equine Practitioners Convention.
- Dr. John Madigan delivered the keynote Milne Lecture at the 2014 American Association of Equine Practitioners Convention to a capacity crowd of more than 3,000.
- Field Service facilitated more than 2,500 patient visits to local ranches and farms, providing scheduled and emergency on-site care for horses and primary care learning opportunities to senior veterinary students and residents.

Equine and Small Animal Reproduction / Theriogenology
- Dr. Andrea Hesser completed her first year in the Small Animal Theriogenology Service’s inaugural residency program.
- The Equine Reproduction Service accomplished the first pregnancy at UC Davis using transvaginal oocyte aspiration and intra-cytoplasmic sperm injection, in collaboration with the Texas A&M University Embryo Laboratory.
- Dr. Camilla Scott won the Chris Smith Award for Outstanding Equine Research Study and Presentation at the 2015 Gerald V. Ling House Officer Seminar Day for her study “Endometrial Tissue Concentrations of Cefitfur Following Intratuterine Infusion in Both Healthy Mares and Mares with Experimentally Induced Endometritis.” This study also won first place in the resident abstract competition at the annual Society for Theriogenology Conference.
- Hosted the 2015 Canine Breeder Excellence Seminar for more than 150 of the top breeders from around the country.

Communications and Marketing
- SVM Communications won the 2015 Association of American Veterinary Medical Colleges Communications Excellence Award for the best communication efforts of any veterinary school in the U.S. The award recognizes the important role communications and marketing play in advancing academic veterinary medicine.
- Rob Warren and Trina Wood won the UC Davis Chancellor's Citation of Excellence Award.
- Facilitated taping of the nationally-televised game show “Jeopardy” at the SVM.
- Increased Facebook followers by 47 percent and Twitter followers by 24 percent to maintain both as the largest-followed social media sites of any veterinary college.
- Successfully promoted the VMTH at American Association of Equine Practitioners Convention, Western Veterinary Conference and the Western States Horse Expo, as well as many local community events.
- Organized “Veterinary Medicine Day,” featuring a BBQ tailgate, information booth, program advertisements, in-stadium announcements, and “jumbotron” video at a UC Davis football game.
- Completed redevelopment of VMTH website.
Livestock Medicine and Surgery
- Dr. Meera Heller joined the Service in 2014, and is now section head.
- Dr. Christie Balcomb was awarded the Zoetis American College of Veterinary Internal Medicine Externship Grant.
- Dr. Joe Smith was awarded the Large Animal Favorite Resident Award by the Class of 2015.
- Dr. Munashe Chigerwe was awarded the Large Animal Favorite Faculty Award by the Class of 2015.

Cardiology
- Expanded imaging capabilities with the addition of a high frequency transesophageal echocardiography probe, which allows the use of ultrasound guidance during cardiac procedures to repair congenital heart defects.
- Added new pressure and ECG monitoring equipment to provide beat-to-beat physiologic recordings in patients receiving minimally invasive heart defect corrections.
- Continued to increase minimally invasive cardiology procedures, making UC Davis one of the busiest interventional cardiology programs in the country.
- Established a relationship with the UC Davis Medical Center Pediatric Cardiology Service and worked together to repair rare congenital heart defects in a cat and a dog. The cat’s story was covered by more than 200 media outlets nationwide, including the New York Times and ABC News.
- The Service’s extensive clinical cardiology research program encompasses multiple species, including dogs, cats, horses, monkeys, parrots and reptiles.
- Dr. Andrew Haertel won the Outstanding Avian, Exotics, Lab Animal or Poultry Research Study and Presentation at the 2015 Gerald V. Ling House Officer Seminar Day for his presentation “Evaluation Of Serum Cardiac Biomarkers in Rhesus Macaques (Macaca mulatta).”
- Dr. Mikaela Mueller won the Outstanding Small Animal Research Study and Presentation at the 2015 Gerald V. Ling House Officer Seminar Day for her presentation “Use of Alivecor Heart Monitor for Rateand Rhythm Evaluation in Cats.”

Nutrition
- Continued to maintain high quality care for a large number of patients requiring a customized nutritional management plan including commercial diet recommendations, homemade diets, enteral feeding plans, and parenteral nutrition.
- Maintained a highly competitive and successful residency training program in small animal nutrition, which is highly respected in the international veterinary clinical nutrition community.
- Faculty delivered presentations at several local, regional, national and international conferences, and participated in numerous media interviews (including ABC’s “Good Morning America”) to promote the Service, the VMTH and the SVM.
- Launched the Healthy Weight and Nutrition Clinic to promote and manage weight loss in dogs and cats.
- Dr. Jennifer Larsen served as chair of the Training Program Evaluation Committee of the American College of Veterinary Nutrition.
- Dr. Andrea Fascetti served as a member at large on the Executive Committee of the American College of Veterinary Nutrition.
Equine Surgery and Lameness (Integrative Sports Medicine; Surgical Emergency and Critical Care)

- Dr. Isabelle Kilcoyne joined the Service as an emergency surgeon, and passed the examination to become board certified in the American College of Veterinary Surgeons. Additionally, Dr. Kilcoyne received the 2014 James M. Wilson Award for outstanding equine research publication by a graduate student or resident in the SVM.
- Drs. Julie Dechant, Isabelle Kilcoyne and Jorge Nieto presented six research projects at the International Colic Research Symposium in Dublin, Ireland.
- Dr. Julie Dechant, the Camelid Symposium organizing committee, and the Camelid Medicine Club organized and hosted the 10th Annual UC Davis Camelid Symposium.
- The Service began using the Lameness Locator to aid in diagnosis of complex lamenesses.
- A team of UC Davis equine surgeons, headed by Drs. Jorge Nieto and Scott Katzman, provided emergency veterinary care for the 2014 Breeder’s Cup at Santa Anita.
- The Service, in conjunction with the Diagnostic Imaging Service, continued to provide state-of-the-art diagnosis and management of many sport horse injuries, with an emphasis toward regenerative and biological therapies.
- Dr. Sarah le Jeune continued to serve as the veterinarian for the Pacific Sporthorse Selection, a position she has held since 2013.
- Dr. Sarah le Jeune presented a research abstract at the Veterinary Sports Medicine and Rehabilitation Symposium and was invited to speak at the Lake Tahoe Equine Conference and the Annual Symposium of the American Academy of Veterinary Acupuncture.
- Dr. Jodie Daglish, the 2014-15 Equine Integrative Sports Medicine intern, was accepted into a Sports Medicine residency at the Colorado State University.

Small Animal Orthopedic Surgery

- Dr. Amy Kapatkin, chief of the Service, was appointed chair of the AO North America Education Committee, and was also appointed the American Board of Veterinary Specialists and American College of Veterinary Surgeons representative to the American Veterinary Medical Association.
- Dr. Duane Robinson was elected to the American College of Veterinary Surgeons Continuing Education Committee. Dr. Robinson also continued to serve on the editorial review board for the Veterinary Surgery Journal, the official journal of the American College of Veterinary Surgeons and the European College of Veterinary Surgeons. Additionally, Dr. Robinson was invited to attend the first Arthrex Veterinary University Orthopedic Faculty Forum.
- Completed a multi-center clinical trial in elbow dysplasia.
- Dr. Jessie Sutton won the Outstanding Small Animal Research Study and Presentation at the 2015 Gerald V. Ling House Officer Seminar Day for her study “Kinetic and Kinematic Gait Analysis in Normal and Myelopathic Dachshunds.”
- As a testament to its acclaimed position in the referral community, the Service saw more than 1,600 patients and performed 465 surgeries.

Diagnostic Imaging

- Provided imaging expertise and support for all VMTH clinical Services through eight diagnostic imaging service areas, and continued to be recognized as one of the largest and most successful diagnostic imaging residency training programs in the world.
- Dr. Kathryn Phillips joined the Service as a clinical faculty member, bringing expertise in all imaging modalities with a clinical interest in equine imaging.
- Recruited faculty member Dr. Derek Cissell, whose research expertise is in tissue engineering with a clinical interest in cross-sectional and equine imaging.
- Dr. Mathieu Spriet successfully administered the first-ever application of positron emission tomography to image the equine distal extremity.
- Drs. Eric Johnson and Rachel Pollard continued pioneering work in image guided tissue ablation and other minimally invasive therapeutic techniques.
- Drs. Erik Wisner and Allison Zwingenberger published an authoritative text entitled, Atlas of Small Animal CT and MRI.
- Dr. Rachel Pollard served on the Executive Council of the American College of Veterinary Radiology.
- Dr. Allison Zwingenberger served on the Examination Committee of the American College of Veterinary Radiology and is the vice president of the European College of Veterinary Diagnostic Imaging.

Livestock Herd Health and Reproduction

- Advancements in the Service included new offerings in embryo transfer, laparoscopic artificial insemination, and semen services for small ruminants.
- Dr. Bret McNabb, chief of the Service, worked with the California Department of Food and Agriculture to develop a new training module for California veterinarians to become certified to sample bulls for trichomonosis, a venereal disease of cattle.
The Service worked with a client in Nevada to bring Gascon cattle, a French breed used primarily for beef production, to the United States for the first time. Gascon embryos were cryopreserved in France, shipped to Nevada, and transferred into Black Angus recipient cows by the Service. This achievement is the beginning of the first American herd of Gascon cattle.

Dr. Joan Dean Rowe neared completion of her 2-year term as President of the American Association of Small Ruminant Practitioners.

Dr. Gabriele Maier won the Outstanding Large Animal Research Study and Presentation at the 2015 Gerald V. Ling House Officer Seminar Day for her presentation “The Effect of Progesterone Intra-Vaginal Devices (CIDRS), PG-600 and Ram Effect on Hastening the Onset of Cylicity and Fecundity of Transitional Taghee Ewes.”

Dr. Catalina Cabrera was awarded the President’s Volunteer Service Award, a prestigious national honor for her volunteer work. As one of only 73 volunteers nationwide to receive the award, Dr. Cabrera was recognized for her more than 70 hours of service on international assignments in Nepal, demonstrating how local citizens can make a worldwide impact.

The Service performed inspection duties at the 95th Annual California Wool Growers Association’s Ram Sale. The SVM has a long-standing tradition of participating in the Ram Sale, having done so since before the first graduating class of 1952.

Performed health checks and inspections of all incoming livestock to the California State Fair, and also supervised the Livestock Nursery exhibit, where students learned about livestock reproduction, obstetrics and herd health, as well as gained important experience for their studies and future careers.

**Shelter Medicine**

Recruited Dr. Kristi Ellis as clinical instructor for fourth-year veterinary students on the shelter medicine rotation. Forty students performed more than 1,000 spay and neuter surgeries under Dr. Ellis’ supervision at the Yolo County Animal Services Shelter. They also gained experience in other surgical procedures, diagnosing and treating medical cases, and knowledge of the many components of shelter medical practice.

More than 1,000 cat portals, developed by Dr. Denae Wagner, were sold and/or installed by the Service to create double-compartment housing in animal shelters, improving conditions by separating living and elimination spaces.

Dr. Kate Hurley delivered the first-ever shelter medicine presentation at the British Small Animal Veterinary Association Congress. She addressed “Capacity for Care” and the history of shelter medicine.

Drs. Kate Hurley and Denae Wagner presented “Capacity for Care” to several Canadian animal shelters.

In partnership with the University of Florida Maddie’s Shelter Medicine Program, the UC Davis Koret Shelter Medicine Program continued to expand the Million Cat Challenge, a five-year campaign aimed at saving the lives of one million cats in North American animal shelters. The program eclipsed 250,000 feline lives saved in 2015.

**Outpatient Medicine**

Facilitated nearly 1,100 patient visits, increasing the Service by 12 percent.

Provided a variety of services to VMTH patients by a board-certified general practitioner, including minor dentistry procedures, spays/neuters, lameness diagnosis and many others.

**Center for Continuing Professional Education**

The Center produced 28 programs for a total of 257 hours of programming on the UC Davis campus, as well as at seminars in Lake Tahoe, Monterey, China and Costa Rica. These 28 programs were attended by 867 veterinarians, 509 RVTs and 1,073 animal owners, who learned from some of the finest clinicians in the world.

Completed re-design of website with enhanced search engine optimization.

Program highlights included: the Inaugural One Health Symposium, which offered CE to vets and CME to Medical Professionals; the International Conference on Feline Health which had a multi-cat track, as well as a scientific track and honored the retirement of Dr. Niels Pedersen; the first Backyard Poultry Seminar to educate both animal owners and veterinarians; the Fall Symposium, which featured two alumni speaker tracks; and the annual Primary Care Veterinary Educators Symposium, which was held at UC Davis for the first time.

**Zoological Medicine**

Provided state-of-the-art veterinary care to animals at the Sacramento Zoo and a referral service for animals at zoological institutions throughout Northern California.

Dr. Ray Wack, chief of the Service, served as chair of the American College of Zoological Medicine board examination credentialing committee.

The Sacramento Zoo Conservation Fund, chaired by Dr. Ray Wack, provided more than $100,000 in grants.
Small Animal Emergency and Critical Care

- The Service cared for more than 4,000 patients (its busiest year) through two 24/7 facilities – the Emergency Room and the Steve C. Haskins Intensive Care Unit. Both facilities feature fully-staffed, around-the-clock care by dedicated technicians and veterinarians to ensure all emergency and critical patients of the VMTH receive life-saving care at any time.

- Dr. Kate Hopper, chief of the Service, was named interim director of the Small Animal Clinic. Dr. Hopper also published the 2nd edition of the textbook Small Animal Critical Care Medicine, one of the leading textbooks in the emergency/critical care specialty.

- Harold Davis, staff manager of the Service, was named the 2015 RVT of the Year by the California Registered Veterinary Technicians Association.

- Added another internship position, bringing the total number of interns to five. Now with a total of 15 clinicians (five interns, four residents, four faculty and two staff veterinarians), the Service is one of the largest in the hospital.

- The ER is one of very few in all of veterinary medicine with continuous access to a large, in-house blood bank, blood purification techniques such as hemodialysis and plasmapheresis, and an independently-staffed, fully-equipped, 24-hour ICU.

- The ER obtained a state-of-the-art biphasic defibrillator that allows for the performance of the highest quality CPR, an absolutely essential intervention when working with critically ill patients.

- The ICU cared for many challenging cases, including a German shepherd with massive hind-end trauma that was hospitalized for 51 days. Following many long hours of care from both the surgeons and the critical care team, the dog walked well with all soft tissue injuries completely healed.

- The ICU received numerous patients with severe lung injury or neurological disease that required mechanical ventilation. The VMTH has a long history of pioneering mechanical ventilation treatments, and is still one of few veterinary hospitals that can offer a high level of care in that capacity. The Service successfully sent home many ventilator patients that would have otherwise died without the around-the-clock care they received in the ICU.

- The Service was instrumental in developing the Faithful Partner Fund, which provides financial support to law enforcement and search and rescues dogs injured in the line of duty. The fund was established with $25,000 matching donations from the SVM and the UC Davis Police Department. The Service has a long history of caring for the critical needs of K-9 officers.

- Faculty of the Service published more than 15 scientific articles and six book chapters over the past year. Many more clinical and laboratory based research endeavors are underway with the aim to further improve the level of care provided to critical patients, as well as share discoveries with professional colleagues.
The VMTH passed its renewal accreditation survey with the American Animal Hospital Association with flying colors, as the scores were even higher than the accreditation three years ago.

Continued progress on active planning for the new Veterinary Medical Center, involving many meetings with faculty, campus architects, architectural consultants and designers, and campus leadership. The preliminary project programming for small animal, large animals and non-domestic species was completed, and the site master plan and sequencing continued to be refined. The planning team moved into intensive Detailed Project Program planning activities for the first phase of the equine and small animal projects, defining clinical space layouts, adjacencies, and efficient patient and people “flows.”

Opened the Intermediate Care Ward (ICW) in the Small Animal Clinic to care for hospitalized patients that need a high level of care, but not to the level provided in the ICU. Previously, those patients were housed in the ICU, as the general care wards were only for patients that needed less intensive monitoring and treatment. By providing a “step-down” level of intensive care, the ICW will improve quality and efficiency of patient care throughout the entire clinic.


Began construction on the Interventional Radiology Surgery Suite, a new operating room that will add to the ever-expanding surgical program being pioneered by the Soft Tissue Surgery Service.

Organized multiple events, including the House Officer Orientation, the First Year Resident Retreat, the Resident Certificate Ceremony, the Staff Service Awards, the Rachel Smith Staff Awards and Holiday Meals for staff and students who worked in the VMTH over the winter holidays.

Opened the new Post Anesthesia Recovery Suite. This new recovery room is larger to accommodate more patients and is closer to the ICU should any complications arise.

Named Dr. Pam Hullinger director of the Large Animal Clinic following the retirement of Dr. Gregory Ferraro.

Dr. David Wilson served as the chair of the American Association of Equine Practitioners Vaccination and Antimicrobial Use Task Forces.

Performed a lip commissure to eyelid transposition for the first time. The surgery created new eyelids from cheek/lip tissue for cats with eyelid agenesis.

A clinical trial on an alternative surgery to treat corneal endothelial dystrophy showed promising results. Known as a SKCAHF (superficial keratectomy and conjunctival advancement hood flap) surgery, the procedure thins the cornea in the region where the surgery is performed, and interestingly enough (for reasons unknown to researchers at this point), also in the central region that is left untouched.

In response to the increased demand for specialist consultations for equine eye cases, the VMTH launched the Service, which provides advanced diagnostics, as well as routine, complex and emergency medical and surgical care to horses with a variety of ocular disorders, including corneal ulcers, corneal and eyelid cancer, equine recurrent uveitis, cataracts, and glaucoma. Dr. Mary Lassaline, one of the nation’s leading equine ophthalmologists, was recruited to lead the Service.

Recently acquired equipment has increased 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 treatments.

Conducted clinical trials to determine the role genetics plays in two equine ocular diseases: bilateral corneal stromal loss in Friesian horses and squamous cell carcinoma in Haflinger horses.

Continued to increase the number of clinical trials offered, with upwards of 90 active at any one time – 50 percent of which are oncology related.

Added clinical trial coordinators with specific technical skills in high quality data collection and patient management.
Small Animal Soft Tissue Surgery
- Continued growth of interventional oncology applications to the treatment of cancer using cryoablation on nasal and bone tumors.
- Developed techniques for the use of near-infrared fluorescence imaging in surgery for identification of sentinel lymph nodes, as well as studies on its use in the intraoperative identification of neuroendocrine tumors.
- Faculty and resident veterinarians from the Service authored ten abstracts presented at the 2015 Veterinary Endoscopy Society meeting.
- Dr. Phil Mayhew became president of the Veterinary Endoscopy Society for the next two years.

Oncology and Radiation Oncology
- Continued to conduct on-going clinical trials for the treatment of canine brain tumors, oral melanoma and canine soft tissue sarcomas, as well as participating in multi-institutional clinical trials for canine lymphoma and mast cell tumors.
- Provided a “Cancer 101” symposium as part of the hospital’s client education programs.
- Oncology clinicians presented the Multidisciplinary Oncology Seminar held in Napa.
- Dr. Michael Kent continued to serve as the director of the Center for Companion Animal Health, as well as the examination director for the American College of Veterinary Radiology–Radiation Oncology board examination committee.
- Dr. Crystal Garnett won the Resident Research Award for Oncology at the American College of Veterinary Medicine Annual Forum for her work evaluating administration of gemcitabine at a fixed dose rate to cats with cancer.
- Dr. Isabella Pfeiffer completed her residency in radiation oncology and accepted a clinical faculty position at the University of Tennessee.

Client Services
- Scheduled more than 50,000 appointments and logged a record-breaking number of telephone calls (including a record 1,294 calls in one day) between three reception areas of SAC, LAC and CCAH.
- Completed an extensive referring veterinarian communication project, which now includes the preferred method of contact for every veterinarian who has referred a patient during the past ten years.
- Held annual staff retreat to discuss and improve customer service standards.
- Hired Laura Doran, Michelle Hirschinger and Tracy Zalasky as new client service managers.

Pharmacy
- Processed and dispensed more than 500,000 inpatient and 75,000 outpatient prescription medications for VMTH patients, as well as 6,000 prescriptions for patients of the UC Veterinary Medical Center San Diego.
- Pharmacy Director Dr. Valerie Wiebe published a textbook entitled, Drug Therapy for Infectious Diseases of the Dog and Cat.
- In collaboration with IT Services, the Pharmacy further developed and refined the clinician order entry program, which permits clinicians to have online access 24 hours a day. The system also allows for prescriptions to be printed for outside pharmacies and be included on the patient profile for improved accuracy.
- Expanded clinical training to include a fellowship in clinical pharmacy at UC Veterinary Medical Center San Diego.
- Researched and developed new formulas for compounded products to better serve the very small and exotic patients that cannot be dosed with commercial formulations.
- Through the pharmacy at UC Veterinary Medical Center San Diego, served as a clinical clerkship site for Advanced Pharmacy Practice Experiences for students from UC San Diego and Western University Schools of Pharmacy.
- Expanding opportunities for pharmacy students interested in veterinary medicine elective clerkships. Dr. Valerie Wiebe now serves as an instructional mentor for students from UC San Francisco, University of the Pacific, USC, University of Arizona, Creighton University, and University of Virginia.
- Through the pharmacy at UC Veterinary Medical Center San Diego, provided didactic classroom training on veterinary drug information and a veterinary pharmacy elective course to UC San Diego Skaggs School of Pharmacy and Pharmaceutical Sciences.
- Dr. Nghi Tham-(Dan) Nghiem completed an antibiogram for cats, dogs and horses that serves as a guideline for antibiotic selection at the VMTH. This improves antibiotic stewardship and helps prevent further antibiotic resistance.

Companion Exotic Animal Medicine and Surgery
- Recruited Dr. Esteban Soto as an associate professor in the Aquatic Animal Medicine section of the Service to help the hospital increase its offerings to private owners of aquatic animals, aquarium exhibits, the aquaculture industry and the California Department of Fish and Wildlife.
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. 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.

Dr. David Guzman 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.

Continued to provide primary veterinary care for animals at the Micke Grove Zoo in Lodi, and assisted the Zoological Medicine Service in caring for animals at the Sacramento Zoo.

Treated nearly 2,400 exotic companion animals and wildlife, including more than 250 different species of birds, reptiles, ferrets, rodents, rabbits, and fish through regularly-scheduled appointments and emergencies.

Worked in conjunction with the California Raptor Center to rehabilitate and release more than 150 birds, including many bald and golden eagles.

Dr. David Guzman obtained an additional board certification, becoming a Diplomate in the European College of Zoological Medicine (Small Mammals). Dr. Guzman was also appointed to assistant clinical professor, and served on the credentialing committee for the American College of Zoological Medicine board examination.

**Small Animal Internal Medicine**

Following their one year of service as staff veterinarians, Drs. Jonathan Dear and Ann Della Maggiore have joined the faculty as assistant clinical professors. The Service now has nine faculty veterinarians, making it one of the largest in the hospital.

Dr. Jodi Westropp, chief of the Service, started collaborative research endeavors with urologists at Northwestern University (which led to studies investigating novel therapies for clinical urinary tract infections in dogs) and UC San Francisco (which resulted in publications to establish the dog as a model for urolithiasis in humans).

Dr. Jane Sykes completed her term as director of the Small Animal Clinic and became interim director of the hospital. She continued to provide consultations on infectious disease cases, and engaged in clinical infectious disease research on antimicrobial drug resistance, fungal infections, and bloodstream infections.

Dr. Lynelle Johnson continued to build a strong caseload in respiratory medicine, and actively evaluated clinically relevant respiratory conditions, often collaborating with the Cardiology Service. Dr. Johnson is a member of the Veterinary and Comparative Respiratory Society.

Dr. Polina Vishkautsan began a fellowship in small animal clinical infectious diseases under the mentorship of Dr. Jane Sykes. The fellowship was the first-ever advanced training opportunity offered in veterinary infectious diseases.

Dr. Jodi Westropp was invited to become a panel member for the American College of Veterinary Internal Medicine consensus statement on urolithiasis, as well as two other panels, which resulted in manuscript guidelines related to feline lower urinary tract diseases.

Dr. Stan Marks continued his collaborative efforts with otolaryngologists at the UC Davis Medical Center in an effort to better understand and manage functional disorders affecting the pharynx and upper esophageal sphincter of dysphagic dogs.

The Service took the lead in calming the public’s fears in the wake of the Ebola crisis that saw a Dallas-area nurse’s dog quarantined following her positive diagnosis for the disease. Infectious disease specialists from the Service appeared on local news casts and helped in the creation of an Ebola Fact Sheet that was widely distributed throughout multiple veterinary medicine outlets.

Dr. Stan Marks continued research interests in infectious enteropathies of dogs and cats, and was awarded the best research poster at the World Small Animal Veterinary Association Conference in Cape Town, South Africa in 2014 for his study evaluating the effect of the probiotic Enterococcus faecium SF68 on presence of diarrhea in weanling kittens.

Dr. Stan Marks continued to collaborate with esophagologists at UCLA to implement high-resolution manometry in dogs to allow accurate assessment of motor activity within the esophagus and esophageal sphincters of fully awake dogs.

Dr. Jodi Westropp was elected president of the American Society of Veterinary Nephrology & Urology.

**Hemodialysis and Blood Purification**

Continued the Hemodialysis Academy, an online course which allows veterinarians, both nationally and internationally, to obtain training in extracorporeal medicine and nephrology. The curriculum included more than 100 lectures, 50 rounds/discussion sessions, and multiple live streaming hemodialysis treatment sessions. The program was delivered to 57 students from 13 countries.

Offered a one-year renal medicine/hemodialysis fellowship. The VMTH now offers residencies, internships, and fellowships in 35 specialty disciplines – the most of any veterinary teaching hospital.
Dr. Larry Cowgill served as a board member of the International Renal Interest Society, and was instrumental in organizing the bi-annual “Renal Week” continuing education symposium.

Dr. Carrie Palm continued research on urinary biomarkers and offered clinical expertise in minimally invasive procedures.

**Dermatology**

- Continued to increase the performance of video-otoscopies and middle ear flushes, often collaborating with the Internal Medicine or Neurology Services.
- Continued a clinical trial for a novel therapeutic to treat pemphigus foliaceus, an auto-immune skin disease in dogs.
- Dr. Stephen White was named secretary of the 8th World Congress of Veterinary Dermatology, and Dr. Catherine Outerbridge is the co-chair of the organization’s Program Committee.
- Dr. Catherine Outerbridge became vice president of the American Academy of Veterinary Dermatology.
- Faculty members of the Service collaborated with the UC Davis School of Medicine’s Department of Dermatology to present teaching opportunities to medical students.
- Continued to see a wide range of species including dogs, cats, horses, goats, pigs, cattle, birds, rabbits, rodents and even an elephant. Increased the overall caseload of the Service by 10 percent, and facilitated more than 1,800 dog/cat patient visits.
- Dr. Katarina Varjonen joined the Service for the 2015 calendar year as a staff dermatologist.

**Neurology / Neurosurgery**

- Dr. Bev Sturges won the inaugural 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.
- To better serve its significant caseload, the Service began the process of interviewing two additional faculty members.
- The Service conducted several research initiatives including:
  - The identification of key pathways in dog gliomas, which is driving future planned clinical trials in targeted therapy
  - New therapies in stem cell based medicine for neurological disorders including congenital diseases, inflammatory disease and spinal cord injury
  - A genetic study on a brain disorder in Saluki dogs
- Dr. Bev Sturges was awarded the Association of American Veterinary Medical Colleges Communications Annual Faculty Achievement Award for her outstanding record of service and contributions to the veterinary profession, both nationally and internationally.

**Integrative Medicine**

- In order to provide the best possible care to the ever-increasing caseload, Dr. Catherine (Cass) Rogers joined the Service as a staff veterinarian. Previously, Dr. Rogers worked as a critical care specialist, and will soon complete her certification in rehabilitation and acupuncture.
- Expanded the Service to include orthotic and prosthetic fittings, allowing animals to walk more easily and comfortably, or at all. This addition, along with the growing acceptance of integrative medicine as a viable complement to traditional medicine, helped the Service increase its caseload by 24 percent.

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