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 VMTH. 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 2013-14, surpassing 47,000 patient visits for the year. This all-time high marks a six percent increase in our overall caseload (6.5% in small animal and 5.5% in large animal), and is a testament to the hard work and commitment of our clinicians and staff. The VMTH is a complex and multi-faceted organization that cannot function without everyone working together toward one common goal. From our wonderful client services staff who facilitate every one of these visits to our highly skilled technical staff who play such a huge role in delivering high quality patient care and instruction under the direction of our expert clinicians, there is no doubt that the VMTH is functioning at a very high 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 135 students in the DVM Class of 2014 spent their 4th year of veterinary school on clinical rotations in the hospital’s many Services, getting hands-on training from some of the top veterinary professionals in their respective fields. Additionally, with the change in academic calendars from quarters to semesters, 136 members of the DVM Class of 2015 started their clinical rotations nearly two months earlier than was the case in the past, causing two 4th year classes to be rotating through the hospital simultaneously. Our clinicians and staff showed great flexibility and did an exceptional job this past year squeezing those 380 individuals into the hospital and providing them with a great educational experience, while maintaining the highest standard of care for our patients and services for our clients.

Many exciting changes are on the horizon for the upcoming year, including a new Ophthalmology Service in the Large Animal Clinic and additions to our faculty and staff leadership in multiple areas. I am certain that our faculty will continue to pioneer cutting-edge procedures that will set the standard for veterinary care in the future, and that we will continue to attract the best of the best in students and residents. These efforts will allow us to continue to lead veterinary medicine and maintain the VMTH as the gold standard for veterinary teaching hospitals worldwide. I look forward to an exciting and fulfilling 2014-2015 academic year.

Regards,

Dr. W. David Wilson, BVMS, MS, HonDACVIM
Director, VMTH
Companion Avian and Exotic Pet

- Treated approximately 2,000 companion animals and wildlife, including 250 different species or breeds of birds, reptiles, rabbits, ferrets, rodents, and fish presented as primary care appointments, referrals or emergencies.
- Worked in conjunction with the California Raptor Center to rehabilitate and release more than 200 birds, including many bald and golden eagles.
- Provided 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.
- Faculty and residents published 24 articles in peer-reviewed journals, gave 24 presentations at national/international conferences, and received more than $180,000 in research grants.
- Dr. Krista Keller won the Outstanding Avian, Exotics, Lab Animal or Poultry Research Study or Presentation Award at the 36th Annual Gerald V. Ling House Officer Seminar Day.
- Dr. Olivia Petritz became board-certified, receiving her Diplomate status in the American College of Zoological Medicine.

Communications and Marketing

- Increased Facebook followers by 63 percent and Twitter followers by 36 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, the Western and Pacific Veterinary Conferences and the Western States Horse Expo.
- Launched the VMTH Case of the Month as a vehicle to bring more attention to VMTH services and unique procedures.
- Established relationships with local and national media to routinely pitch VMTH success stories to producers and editors.
- Completed redevelopment of several sections of VMTH website.
Small Animal Internal Medicine

- Continued to lead the region in innovative minimally invasive procedures, including laser surgery for correction of congenital ectopic ureters and swallowing disorders in dogs.
- Maintained the highest possible quality of care with renowned faculty in lower urinary, renal, respiratory, endocrine and gastrointestinal medicine and infectious diseases.
- Faculty published 42 peer-reviewed manuscripts and contributed numerous book chapters to the top textbooks in the country.
- Dr. Jane Sykes, director of the Small Animal Clinic, served as president of the Specialty of Small Animal Internal Medicine for the American College of Veterinary Internal Medicine, and published an authoritative textbook entitled, *Canine and Feline Infectious Disease*.
- Dr. Jodi Westropp was elected president of the Society for Veterinary Nephrology and Urology, and Dr. Larry Cowgill was promoted to the board of the SVNU.
- Dr. Stan Marks was nominated to the board of the Dysphagia Research Society, an international group whose function is to enhance research pertinent to normal and disordered swallowing and to provide a multidisciplinary forum for presentation of research into swallowing disorders.
- Dr. Carrie Palm served as chair of the Small Animal Internal Medicine Credentials Committee of the American College of Veterinary Internal Medicine.
- Dr. Lynelle Johnson served as chair of the American College of Veterinary Internal Medicine's Rating Committee for the Small Animal Internal Medicine examination.
- Dr. Bing Yun Zhu won the Outstanding Small Animal Research Study and Presentation at the 36th Annual Gerald V. Ling House Officer Seminar Day, as well as the Lagniappe Smith Memorial Award for Clinical Proficiency and Contributions to Teaching.

Dermatology

- Continued to see a wide range of species, including dogs, cats, horses, goats, pigs, birds, rabbits, etc.
- Continued to increase overall case load.
- Offered various services to the public for their companion animals, including allergy testing and video-otoscopy. The latter procedure was performed on a horse with severe otitis externa (inflammatory ear disease) which was subsequently successfully treated with temporary ear wicks.
- Gained extensive experience with the new anti-pruritic (anti-itch) medication oclacinib in dogs.

Equine Medicine (Emergency, Critical Care and Neonatology; Internal Medicine; Dentistry)

- Dr. Monica Aleman, MVZ Cert., PhD, DACVIM (Internal Medicine, Neurology) joined the Service as a faculty member following her board certification in Neurology, making her one of a short list of specialists who are dual board certified in Large Animal Internal Medicine and Neurology.
- Increased offerings in equine dentistry and built strong collegial relationships with other practitioners by providing training in routine equine dental examinations, dental imaging and occlusal adjustment.
- Led an extensive research study that showed equine protozoal myeloencephalitis (EPM) to be more widespread throughout the United States than originally expected. Researchers collected data on 3,123 horses from 49 states, and worked with Dr. Pat Conrad’s lab, that developed exclusive EPM testing at UC Davis, to promote the importance for horse owners to test for multiple sources of EPM.
- Dr. Gary Magdesian was elected to serve on the American Veterinary Medical Association Task Force on Veterinary Compounding.
- Dr. Jamie Prutton won the Chris Smith Award for Outstanding Equine Research Study and Presentation at the 36th Annual Gerald V. Ling House Officer Seminar Day.

Behavior

- Offered new options for behavior appointments, including brief evaluative consults and technician behavior modification appointments.
- Dr. Melissa Bain completed her tenure on the Board of Regents of the American College of Veterinary Behaviorists.
- Presented research at the Veterinary Behavior Symposium, demonstrating the effects of early socialization in dogs on their future behavior.
- Two veterinary students, with Dr. Melissa Bain as their mentor, won first and second place for the Veterinary Behavior Symposium Veterinary Student Research Award, and presented their research at the national meeting.
- In conjunction with Community Practice, the Service conducted “Yappy Hour” puppy socialization classes for local dog owners and their puppies.
- The Service increased its Facebook and Twitter followers by more than 50%.
Administration

- Facilitated the 36th Annual Gerald V. Ling House Officer Seminar Day, with 41 resident veterinarians presenting 44 research studies.
- Completed the transition of 4th year clinical rotations from a 48-week program to a more in-depth 59-week program. Overcame scheduling challenges associated with the 2-month overlap of 4th year classes on rotation that accompanied this change.
- Continued progress on planning for the new hospital, conducting many meetings with faculty, campus architects, architectural consultants and designers, and campus leadership.
- Visited the new hospitals at the University of Florida, North Carolina State University and the University of Tennessee to evaluate facilities, design concepts and financial models.
- Completed strategic planning exercises for livestock clinical instruction and service programs.
- Made capital equipment purchases for clinical services that totaled $1,011,084. Equipment purchased included: Echocardiogram Machine, Arthroscope & Electro Generator, Hydraulic Chute, X-ray System with Hydraulic Tables, Syngo Dynamics Systems, Cone CT Scanner, Cardell Monitors, iStats, Defibrillator, Serofuge 2001, Incubator, Quality Assurance Equipment, Medfusion Syringe Pumps, Pulse Oximeters, Video Ureteroscope, Equine Follicular Aspirator & Injection Pump, C-Arm Fluoroscopy Unit, Sterilizer, Ultrasound Unit, Defibrillator, Oxygen Cage, and Bulk Oxygen System for VMII.
- 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.

Information Technology

- Added discharge instruction templates, which are named customized templates each Service can create and can include tags for automatic insertion of data items from the patient record.
- Designed a map creator for Large Animal Registration, which facilitates exporting location data from a set of records to map the locations in Google Maps.
- Installed a product list manager/prescription manager for the Nutrition Service.
- Created a search engine for outside clients to more easily find lab procedures.
- Completed deployment of online lab ordering with multiple improvements.
- Added an online clinician entry for inpatient and outpatient pharmacy orders.
- Added “External Rx Clinician” orders allowing online prescriptions to be filled elsewhere.
- Completed a major modification of the anesthesia/surgery schedule, including many anesthesia-related workup fields.
- Modified receiving schedules to support sub-schedules for a Service.
- Created program to allow clinicians to be able to view all prescriptions they have written.
- Integrated VMACS with Kuali PO and Invoice Payment modules.
- Expanded VMACS visit and POS records to include PDFs and other attachments.
- Upgraded 150+ computers from Windows XP to Windows 7, including replacement of hardware, at a pace of 4-5 desktops per day.
- Transitioned from T-Mobile to Verizon as our main mobile communications provider, which involved transferring nearly 300 users and numbers to new smartphone devices.
- Upgraded UCVMC-San Diego's computing infrastructure with new servers, management systems and end-user workstations.
- Completed the implementation phase of the computing monitoring solution included in the technological strategic roadmap. This solution will allow IT to prevent potential issues that could lead to outages and negatively impact hospital operations.
- Made substantial progress in the planning process for merging the VMTH and SVM IT groups under the leadership of the newly recruited SVM IT Director, Randy Anderson.
Pathology

- Hosted the 31st Annual West Coast Veterinary Pathology Conference, with 60 individuals from academic institutions, biopharmaceutical companies and CROs attending the meeting. Eighteen case reports were presented by veterinary pathology residents and veterinary students, representing a wide range of species, including domestic, zoo/exotic, and laboratory animals.
- Six residents passed the board certification examination of the American College of Veterinary Pathologists.
- Continued support of the Wildlife Health Center’s Mountain Gorilla One Health (Gorilla Doctors) project through histopathology on mountain gorillas, Grauer’s gorillas and sympatric golden monkeys.
- Offered residency rotations and training in marine mammal pathology through The Marine Mammal Center with histopathology again coming to the Anatomic Pathology Service after a hiatus of more than a year.
- Provided histology support to VM:CPL, CNPRC, a variety of other SVM researchers, and the California Department of Fish and Wildlife.
- Continued to be the “go-to” place for elephant necropsies in California.
- Dr. Molly Church, a graduate student in the Pesavento laboratory won the Young Investigator Award at the 2013 annual meeting of the American College of Veterinary Pathologists.
- Dr. Steven Kubiski, a graduate student in Pesavento laboratory won the 2013 Harold Casey Award for Excellence in Veterinary Pathology.
- Drs. Patty Gaffney and Christina Eckstrand were the recipients of the Peter C. Kennedy Training Fellowship in Veterinary Anatomic Pathology.
- Dr. Elise LaDouceur was one of only seven pathologists within the Sea Star Working Group in the United States, a group of scientists investigating the cause of sea star wasting disease (SSWD). SSWD has wiped out entire populations of sea stars along the Pacific coast of North America—from Alaska to Southern California—in the last year.
- Developed a “resident swap” with the Anatomic Pathology Department at the UC Davis Medical School.
- Pathology residents externed at UC San Diego, allowing them to meet with researchers at UCSD and work with medical and coroner/forensic pathologists.
- Gained approval from the Graduate Clinical Education Committee to offer a livestock-focused joint residency with the California Animal Health and Food Safety Laboratory System.
Community Practice
- Expanded the “Yappy Hour” puppy socialization class, offering a four-week package to clients of both Community Medicine and local veterinary clinics.
- Fully implemented the mini CEX student evaluation system. All students are now evaluated on history taking, physical exam and client communication during their 2-week rotation through Community Practice.
- Drs. Tami Pierce and Blythe Jurewicz completed the Zoetis FRANK training in client communication.
- Community Practice was selected to host the upcoming 2014 International Primary Care Educators Symposium, to be attended by primary care veterinary educators from the United States, Canada, Europe and Australia.

Dentistry and Oral Surgery
- The clinical and research program focusing on bone regeneration continued to expand and drew national press attention, including a feature in the New York Times. The reconstruction of mandibular critical size defects in dogs now includes bilateral rostral mandibulectomy cases.
- Continued collaboration with the Biomedical Engineering Department has led to the use of 3-D printing of skulls for the treatment planning of challenging maxillofacial cases.
- Implemented cone-beam computed tomography 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 leading journals, and covered topics in oral pathology, oral diagnostic imaging and major maxillofacial surgery.
- Several clinical trials involving mesenchymal stem cells for the treatment of chronic stomatitis in cats are now being conducted.
- Added Registered Dental Hygienist Kimi Kan to its team to focus on the standard of care and teaching of periodontal treatment.
- Faculty took the initiative to publish a multi-institutional commentary recommending against the use of dental implants in dogs and cats.

Anesthesiology
- Anesthetized more than 3,500 small animal patients and more than 500 large animal patients.
- Dr. Bruno Pypendop served as president of the American College of Veterinary Anesthesia and Analgesia.
- Members of the Service published 20 peer-reviewed manuscripts on anesthesia and/or pain management.
- Dr. Robert Brosnan investigating new inhalation anesthetics with novel mechanisms of action that have been developed in his laboratory.
- Dr. Linda Barter's research focusing on anesthetic management of rabbits, a species in which a high anesthesia-related mortality rate is reported.
- Dr. Alonso Guedes conducting multiple ongoing clinical trials on management of pain related to osteoarthritis in dogs and cats, and laminitis in horses.

Clinical Pathology and Laboratory Services
- Microbiology received and provided results on more than 10,000 submissions from VMTH patients and outside veterinarians.
- Dr. Bill Vernau was elected to the Teaching Academy of the Consortium of Western Regional Colleges of Veterinary Medicine.
- Dr. Andrew Burton, Clinical Pathology resident, won the Young Investigator Award at the 2013 annual meeting of the American College of Veterinary Pathology.
- Drs. Sean Owens and Bill Vernau served on the American College of Veterinary Pathology Examination Committee.
- Microbiology implemented the use of MALDI-TOF mass spectroscopy for pathogen identification. This technology is revolutionizing bacteriology, allowing identification of pathogens from incubated cultures in minutes as compared to days using conventional methodologies.
- Dr. Andrew Burton won the Gerald V. Ling Award for Outstanding Small Animal Research Study and Presentation at the 36th Annual Gerald V. Ling House Officer Seminar Day.
Small Animal Emergency Medicine / Critical and Intensive Care

- The Intensive Care Unit treated more than 1,100 patients, and Emergency treated more than 3,500 patients, increasing the Service caseload by nearly 10 percent.
- Performed mechanical ventilation on 30 dogs and cats, including a tiny 2-pound puppy – one of the smallest veterinary patients to have been successfully weaned from mechanical ventilation.
- Faculty members published more than 20 manuscripts, covering a broad range of topics, including: abnormal physiology of bulldogs; safe infusion rates of hetastarch in dogs; platelet abnormalities in cats with hypertrophic cardiomyopathy; abnormal white blood cell counts in dogs and cats; evaluation of acid base disorders in dogs and cats; and studies on cardiopulmonary resuscitation.
- Dr. Matt Mellema established several new research collaborations including: development of a state-of-the-art facility on campus for small (sub-micron) particle analysis; contracted with Royal Canin to study nanoscale events leading to urolithiasis in dogs and cats; and contributions to the development of a UC Davis School of Veterinary Medicine/UC San Francisco School of Medicine urolithiasis collaborative research team.
- Dr. Matt Mellema won the 2013 Zoetis Distinguished Teacher Award by the Association of American Veterinary Medical Colleges. The award—considered the most prestigious national teaching award in veterinary medicine—recognizes excellence in professional veterinary medical education, and is presented to an educator whose sustained record of teaching excellence and ability, dedication, character and leadership has contributed significantly to the advancement of the profession.

Livestock Medicine and Surgery

- Dr. Anita Varga and her faculty colleagues, together with the Food Animal Reproduction and Medicine Club, organized the successful 3rd Annual Low Stress Cattle Handling Seminar and the 5th Annual Food Animal Practitioners CE Symposium.
- Dr. Christie Balcomb received the Food Animal Incentive Award at the 2014 Western Veterinary Conference.
- Dr. Munashe Chigerwe received the SVM Distinguished Teacher and the UC Davis Academic Senate Teaching Awards.

Equine and Small Animal Reproduction / Theriogenology

- Expanded offerings in the Small Animal Theriogenology Service to broaden the existing range of high quality reproductive care and breeding management services, and increased caseload.
- Added a residency training program in reproductive medicine for companion animals following a donation from the American Kennel Club and the Theriogenology Foundation. This program is in addition to a current Comparative Theriogenology residency program with an equine focus.
- Began offering a new client service in advanced reproductive techniques known as transvaginal aspiration of oocytes. UC Davis aspirates oocytes from ovaries guided by a transvaginal ultrasound probe. The oocytes are then sent to Texas A&M University, where they perform intracytoplasmic sperm injection and send the embryos back to UC Davis for transfer to recipient mares, proving to be very useful for subfertile mares and stallions.
- Embryo transfer service is now in its second year, and recipient mares have served nicely for both client service as recipient mares and as teaching animals for students on the clinical rotation.
- Hosted the inaugural Canine Breeders Symposium, one of the most popular educational seminars of the year at UC Davis.
- Began offering advanced techniques in semen handling for problem stallions and stud dogs, including selective centrifugation protocols to sort out and concentrate progressively motile, viable sperm from non-viable sperm.

Cardiology

- Recruited Dr. Lance Visser, DVM, MS, to the UC Davis team and Dr. Timothy Hodge, DVM, DACVIM, to the UCVMC-San Diego team. When these individuals come on board this fall, the UCD clinical service team will comprise five faculty cardiologists and be one of the largest academic cardiology units in the country. The Service also consists of three resident veterinarians training to be cardiology specialists.
- Added a cardiac ultrasound workstation that enabled the Service to generate reports that integrate with the hospital database and can be faxed to referral veterinarians with included images and recommendations. The institution of this new reporting software made case reports readily available to other clinicians within the hospital and provided faster turnaround time for reports to referring veterinarians.
- Procedural caseload greatly increased with more frequent repair of congenital heart defects in 2014 than the past several years.
Neurology / Neurosurgery

- Conducting Phase II clinical trial using stem cells to treat spinal cord injury caused by intervertebral disc disease. Dogs suffering from acute disc extrusion severe enough to cause loss of all spinal cord function (deep pain negative) will be able to have their own stem cells implanted in the spinal cord following surgical decompression. Phase I of this trial using similar treatments showed improvement in spinal cord function.

- Currently establishing a DNA database for French bulldogs to learn more about spinal diseases in the breed and their clinical significance. The study focuses on older French bulldogs that have not had clinical spinal cord disease in their lifetime.

- Identified a genetic susceptibility locus for the development of brain tumors.

- Resident Dr. Beth Boudreau won the research award for Neurology at the annual American College of Veterinary Internal Medicine conference for her work defining altered molecular genetic pathways in canine gliomas.

- Conducting on-going clinical trials for the treatment of canine brain tumors.

- Identified the gene causing Alaskan Husky Encephalopathy and developed a commercially available test for the disease.

Integrative Medicine

- Appointed Dr. Jamie Peyton, DVM, DACVECC, CVRT, CVA as Service Chief. Dr. Peyton is a member of several integrative medicine associations, including the American Academy of Veterinary Acupuncture, the American Association of Traditional Chinese Veterinary Medicine and the International Veterinary Academy of Pain Management.

- Expanded the Service to include more appointment opportunities in physical rehabilitation, acupuncture, and laser therapy; exploring the addition of service offerings in pain management and palliative/hospice care. This expansion increased caseload by 63 percent.

- Launched a clinical rotation elective for 4th year students.

Outpatient Medicine

- Facilitated nearly 1,000 patient visits, increasing the Service by 2.5 percent.

- Provided a variety of services to VMTH patients by a board-certified general practitioner, including minor dentistry procedures, spay/neuters, lameness diagnosis and many others.
Nutrition
- Faculty published seven peer-reviewed scientific publications, including the *Journal of the American Veterinary Medical Association* publication of resident Dr. Tammy Owens’ paper, “Total dietary fiber composition of diets used for obesity and diabetes mellitus in cats.”
- Dr. Tammy Owens was accepted into a UC Davis graduate program, and received funding support from the Graduate Group in Nutritional Biology.
- The Service held a strategic planning retreat and has started to enact some of the outcomes from that meeting, including progress toward an online client ordering system.

Small Animal Orthopedic Surgery
- Drs. Sun Kim and Mark Fuller successfully passed the American College of Veterinary Surgery board examination and are now Diplomates of the ACVS-SA.
- Added Dr. Duane Robinson, DVM, PhD, DAVCS-SA, to the faculty. Dr. Robinson comes to the VMTH as an experienced orthopedic surgeon, previously on faculty at Louisiana State University. Dr. Robinson’s research focus is on infection with orthopedic implants. His addition allows the VMTH to offer the TTA procedure in addition to the TPLO and lateral suture for surgical management of cruciate disease.
- Expanded the minimally invasive fracture repair program.
- The Service now offers platelet rich plasma or stem cell treatment for osteoarthritis.
- Expanded the ability to offer PennHIP radiographs, as both Drs. Amy Kapatkin and Duane Robinson are certified to perform these studies.
- Dr. Amy Kapatkin was appointed as Editor-in Chief of the AO small animal surgical reference.
- Participating in a multi-institution randomized clinical trial for canine elbow dysplasia.
- Continues to offer all surgical procedures, and will have the equivalent of 1.5 services running to accommodate the growing client base and caseload.

Equine Field Service
- Facilitated nearly 2,500 patient visits to local ranches and farms, providing scheduled and emergency on-site care for horses.

Equine Surgery and Lameness
- Added Dr. Scott Katzman, DVM, DACVS-LA, to the surgery team as an Assistant Professor of Clinical Equine Surgery. His experience includes completion of a three-year residency at UC Davis, as well as an additional three years in private practice.
- Drs. Jorge Nieto and Sarah Gray, along with Gabe Gill, provided veterinary support at the Breeder’s Cup World Thoroughbred Racing Championships at Santa Anita.
- Actively using regenerative medicine for successful therapy of orthopedic injuries in sport horses.

Equine Integrative Sports Medicine
- Dr. Sarah le Jeune, DVM, DACVS, DECVS, CVA, initiated the new Service, which consists of comprehensive evaluation and treatment programs including acupuncture, chiropractic and saddle fit evaluation.
- Increased acupuncture appointments by 39 percent.

Diagnostic Imaging
- Provided thousands of MRI, CT, ultrasound and radiology patient studies in support of other hospital Services.
- Provided training opportunities for eight house officers, making it the largest clinical imaging training program at any veterinary hospital.
- The Large Animal Ultrasound Service hosted the 2nd Annual American Association of Equine Practitioners 360 Course on Musculoskeletal Ultrasound. The sold out event drew clinicians from several countries and proved to be one of the most popular imaging courses anywhere in veterinary medicine.
- Drs. Betsy Vaughan and Mary Beth Whitcomb, along with former Large Animal Ultrasound Fellow Dr. Rachel Gottlieb, made presentations at the annual American Association of Equine Practitioners Convention (held this year in Nashville), the largest gathering of equine practitioners in the world.
- The Large Animal Ultrasound Facebook page eclipsed the 2,000 fan milestone, attracting followers from more than 40 countries.
- Large Animal Ultrasound Fellow Dr. Georgette Shields became the third fellow to be accepted into a radiology residency, set to begin in the upcoming academic year at Colorado State University.
Livestock Herd Health and Reproduction
- Dr. Catalina Cabrera traveled to the Republic of Georgia with USAID to perform advanced reproductive procedures, including bovine embryo transfer and swine artificial insemination, to improve the local livestock industry.
- Dr. Gaby Maier, a first-year resident, traveled to Nicaragua to help teach and improve regional animal health.
- The Service is in the process of expanding livestock advanced reproductive technology services for clients, including laparoscopic procedures and bovine embryo transfer.
- Dr. Kristopher Flores won the Outstanding Large Animal Research Study and Presentation at the 36th Annual Gerald V. Ling House Officer Seminar Day.

Shelter Medicine
- Provided veterinary services for local animal shelter, Yolo County Animal Services, through the UC Davis/Yolo County Animal Services Partnership. The Service helped implement programs and protocols (including a Daily Health Monitoring Program staffed by UC Davis Animal Sciences undergraduate interns) that resulted in the animal shelter having an average live release rate of 90 percent in 2013. This ranks Yolo County Animal Services among the highest performing in the state of California in terms of positive animal outcomes.
- The Koret Shelter Medicine Program, in partnership with the University of Florida Maddie’s Shelter Medicine Program, created an educational campaign called “The Million Cat Challenge,” which provides resources and guidance on key initiatives that will help shelters reduce euthanasia of cats in North American animal shelters by a target of one million cats by 2019.
- The Koret Shelter Medicine Program expanded its facility design consulting service, including in-depth consultations on shelter facilities for two local communities, in Placer County and the city of Tracy.
- Dr. Kate Hurley has served as the co-chair of the Organizing Committee for a recognized specialty in Shelter Medicine since the process for specialty formation was initiated in 2005. That process culminated in recognition by the American Veterinary Medical Association in 2014 of Shelter Medicine as a specialty under the umbrella of the American Board of Veterinary Practitioners.

Hemodialysis and Renal Medicine
- Led online international hemodialysis rounds twice a month where clinicians worldwide gathered to discuss cases, new treatments and new visions.
- Established an internet-based virtual fellowship program where Dr. Larry Cowgill mentors individuals three times a week online.
- Increased treatment offerings of therapeutic plasma exchange, an extracorporeal apheresis treatment of severe or refractory immune-mediated diseases.
- Developed the online Hemodialysis Academy, which allows veterinarians, both nationally and internationally, to obtain training in extracorporeal medicine and nephrology.

Ophthalmology
- Launched a highly successful innovative multidisciplinary approach to blocked nasolacrimal duct obstruction in dogs, cats and horses.
- Prepared for launch of Equine Ophthalmology Service to begin early in the next academic year with the addition of an equine specialist, Dr. Mary Lassaline.
- Increased service offerings for equine ophthalmology patients with the acquisition of a semiconductor diode laser device that allows ophthalmologists to perform new treatments on horses’ eyes, including cyst removal and a glaucoma treatment.
- Dr. Brian Leonard won the Outstanding Small Animal Research Study and Presentation at the 36th Annual Gerald V. Ling House Officer Seminar Day.
Veterinary Center for Clinical Trials

- Under leadership of Dr. Erik Wisner, director, and Dr. Chrissy Kinkade, analyst, the Center was established in 2013 to facilitate clinical trials conducted at the VMTH and to serve as a one-stop portal for clinical investigators, animal owners, referring veterinarians, corporate sponsors and donors.
- Launched extensive website that outlines all of the clinical trials being conducted.
- Worked with VMTH Communications & Marketing office to extensively promote the Center and current trials through distribution of publications (including the “Helpful Information for Pet Owners” pamphlet), flyers specific for different clinical trials, direct emails to the referring veterinarian community, and other means of promoting trials.
- Helped coordinate more than 60 clinical trials, and continued to expand the Center. Examples of clinical trials included:
  - Dentistry & Oral Surgery: Fat-derived mesenchymal stem-cell therapy for cats with chronic gingivostomatitis.
  - Genetics/Neurology & Neurosurgery: Genetic investigation of vertebral column anomalies and degenerative disc disease in the French bulldog.
  - Ophthalmology: Efficacy of autologous mesenchymal stem cells for treatment of equine recurrent uveitis following intravenous injection.
  - Reproduction (Theriogenology): Endometrial biopsy-related changes in older maiden mares.

Client Services

- Added Jennifer Thompson as new After Hours Client Services manager.
- Added Meggan Brownrigg as new Internal Medicine Service referral coordinator.
- Several referral coordinators and client service representatives completed training for American Animal Hospital Association Veterinary Reception Certification.
- Checked in more than 47,000 patients and logged more than 127,000 phone calls between three reception areas of SAC, LAC and CCAH.

Center for Continuing Professional Education

- Hired Kate Tweddale, MBA, as the new continuing education coordinator. Kate’s background brought a vast skill set in event coordination, fundraising, business acumen, and organization.
- The Center produced several new successful events geared toward veterinary professionals seeking to fulfill continuing education requirements. Events included:
  - The Donkey Welfare Symposium was attended by nearly 200 veterinarians and donkey owners from four countries and 23 states. The lecture and laboratory program was highlighted by social events and panel discussions.
  - The Back to School Seminar for technicians and veterinary assistants attracted almost 300 attendees to learn from nearly 40 faculty and staff members in three tracks over two days.
  - The inaugural Winter Conference offered nearly 60 hours of individual CE. Positive attendance ensured the 2nd annual conference to be slated for next winter.
  - Highlights of other events throughout the year included a regional meeting near Yosemite (Small Animal Ophthalmology) and a specialist-focused multidisciplinary meeting on Medical and Surgical Nephrology.
- The Center produced more client-focused events to educate the pet ownership community. The most successful event was Canine Reproduction 101, which attracted an in-person capacity crowd of nearly 200 breeders and owners and a webinar audience of an additional 240 participants. The seminar was produced in conjunction with the Theriogenology Club and the VMTH’s Theriogenology Service.
- The Center continued to partner with student clubs to bring innovative and inspiring programs to campus. The Food Animal Reproduction and Medicine Club spearheaded an effort to successfully attract world-renowned cattle behaviorist Temple Grandin as the keynote speaker at the Low Stress Beef Handling Symposium, held in conjunction with the Beef Practitioners Symposium. The integrated programs allowed for producers and practitioners to share experiences, improve their knowledge, and understand the unique problems held by all stakeholders in the beef production industry.
- Completed extensive website transformation to enable online registration for events, including acceptance of credit cards.
Zoological Medicine

- Provided state-of-the-art veterinary care to the animals at the Sacramento Zoo and a referral service for animals at zoological institutions throughout Northern California.
- Coordinated the placement of a ureteral stent in a Sumatran tiger at the Sacramento Zoo, the first time this procedure has been performed on a tiger. The procedure involved more than 40 veterinarians, technicians and physicians, representing four VMTH services, three equipment manufacturers and two human hospitals.
- Dr. Anne Burgdorf provided veterinary services for the Zoological Medicine Service during the long faculty recruitment effort.
- Two residents passed their American College of Zoological Medicine board certification examinations, becoming specialists in zoological medicine.
- Published four manuscripts in peer-reviewed journals.

Small Animal Soft Tissue Surgery

- Several interventional radiology techniques have been established as the standard-of-care at the VMTH, including ureteral diversion techniques and coil embolization of intrahepatic portosystemic shunts. Additionally, several new innovations utilizing the locoregional delivery of chemotherapy and embolic agents for tumors considered to have poor outcomes are showing promise.
- Four residents from the Surgery Service (Soft Tissue and Orthopedics combined) passed board certification examinations to become Diplomates of the American College of Veterinary Surgeons.
- Faculty played a key role in implementation of surgical training in the new curriculum, helping students make the transition into the VMTH in the coming academic year.
- Validated the use of near-infrared fluorescence imaging to improve the surgical treatment of idiopathic chylothorax.
- Initiated studies on the use of near-infrared fluorescence imaging to improve tumor localization and extent in dogs and cats with cancer.
- Innovated a novel interventional oncology procedure for the treatment of nasal tumors in dogs.
- Implemented new minimally invasive biopsy procedures for lymph nodes in the chest and abdomen in order to improve treatment recommendations for clinical veterinary patients with cancer.

Oncology and Radiation Oncology

- Added Dr. Jenna Burton, DVM, MS, DACVIM. Dr. Burton joined UC Davis faculty from Colorado State University where she was an Assistant Professor of Oncology and was responsible for the day-to-day management of, and recruitment of patients to, all clinical trials at the CSU Animal Cancer Center.
- Added Dr. Catherine Hansen, DVM, DACVR. Dr. Hansen joined the faculty following completion of a residency in radiation oncology at UC Davis, as well as an internship and a position as a post-doctoral associate at the University of Pennsylvania.
- Acquired a TrueBeam linear accelerator, an innovative system that enables expanded options to treat cancer with image-guided radiotherapy. This system is the most advanced linear accelerator anywhere in veterinary medicine.

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