

School Providing Exceptional Zoo Medicine Training

The 563 animals examined annually at the Sacramento Zoo keep faculty member Ray Wack and his Zoological Medicine Service team busy. The school has enjoyed a long relationship with the zoo, providing veterinary care for their 161 species of animals, and training opportunities for DVM students and zoological medicine residents. Most of the care is provided in the Murray E. Fowler Veterinary Hospital, named after the late professor who founded the program in 1974.

The Zoological Medicine Service is recognized as one of the premier training programs in the world for students and residents interested in treating zoo animals. In the past five years, more than 75 DVM candidates have been mentored as zoological track students. There are currently three residents in the training program. Following a zoo residency, most veterinarians will pursue board certification in the American College of Zoological Medicine (ACZM). The ACZM is a small specialty college with a very strong UC Davis representation, including three new members this past year.

Recently, some of the animals' treatments have garnered national attention, including a cutting-edge procedure to place a stent into a Sumatran tiger using a minimally invasive interventional radiology technique, and the annual examinations of the zoo's 39 flamingos and nine koi fish.



Kate Gustavsen prepares to vaccinate one of the Sacramento Zoo's flamingos.



◀ First-time visitors to the Knights Landing veterinary clinic.

One Health in Action

A tiny brown Chihuahua mix, a crate full of Doberman puppies, a massive black and white pit bull—all waited outside the Knights Landing Community Center on a recent Sunday for their chance to visit a veterinarian. Less than a block away, humans in need of preventive health care waited for the doctor as well.

On one Sunday each month, these clinics are free and open to residents of this economically underserved and largely agricultural community. Veterinary students from the school organized the animal wellness center in October 2013 as a One Health counterpart to the human clinic started by UC Davis medical students in January 2012. In addition to physical exams, screening, and vaccines, both groups present classes to the community on topics such as nutrition, behavior/mental health, environmental health and shared diseases (leptospirosis, valley fever, rabies, Lyme, etc.).

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Commencement 2014



Commencement

David Kim and Morvarid Afraz were among 135 newly minted DVMs celebrating their graduation from the school on June 13th. They both plan to practice small animal medicine. Three MPVM graduate students also received their degrees in the 63rd commencement ceremony. Congratulations to the newest graduates and their families!



Alumni Achievement Awards

Each year, the school proudly bestows Alumni Achievement Awards to outstanding alumni for their unique and valued contributions to veterinary science, veterinary practice, or the advancement of human welfare. The 2014 award recipients are (from left to right with Dean Lairmore in the middle): Ralph Edward Barrett, for contributions to the advancement of veterinary education and the development of specialty practice; Sharon Center, for dedication to providing the highest standard of care while advancing the field and practice of internal medicine; Yrjö Gröhn, for leadership and impact in the field of veterinary epidemiology; and Mark Markel, for exemplary achievements in academic veterinary medicine and numerous contributions to the fields of comparative orthopedics and veterinary surgery.

One Health in Action Continued from page 1

The veterinary clinic serves approximately 75-85 patients each month. At the end of the day, the veterinary and human medical teams of students, volunteer veterinarians and physicians come together to conduct joint rounds, fostering open communication to develop a One Health approach to the community's needs.

"The discussions really help give us a better community perspective of health," said Joelle Sweeney, Class of 2015 and the veterinary project's leader.

Not only are the clients leaving the clinic with more knowledge that they came with, the students are too. Their direct interactions with clients improve physical exam technique, knowledge of basic health care topics and client communication.

"Our goal is to provide the Knights Landing community with knowledge and solutions toward healthier lives, as well as a training ground for health students and professionals to broaden their skills," Sweeney said. "It's a win-win situation for everyone."

An expert One Health Advisory Board, which includes faculty members Patricia Conrad, Jonna Mazet, Dave Bunn and Michael Wilkes, guides the veterinary and human medical students in the Knights Landing project. Interested in volunteering or wish to contribute needed medical supplies? Please contact klcucdavis@gmail.com or call (530) 746-8125.



Caitlyn Hwe, Class of 2017, holds a nine-week old Doberman puppy brought in with five other littermates for their first check-up and vaccinations.

Water Conference Wrap-up

More than 100 participants gathered recently at the Western U.S. Irrigation Water Conference, hosted by the FDA's Western Center for Food Safety (WCFS) at UC Davis to discuss big changes to food safety laws. Under the FDA's Food Safety Modernization Act (FSMA), irrigation water quality will soon be subject to stricter criteria in an effort to prevent or reduce the introduction of pathogens to raw produce via water.

While the goal of the new FSMA standards is to ensure the nation's food supply is safe by shifting the focus from response to prevention of contamination, the current proposed rules might be contentious among growers and challenging to implement, especially during a drought cycle, explained Rob Atwill, principal investigator of WCFS and director of the Western Institute for Food Safety and Security—both of which are located at the school.

"The conference was a good opportunity to bring together the various agencies and stakeholders tasked with implementing the proposed rule for agricultural water quality," Atwill said. "Throughout the two days we discussed various impediments to implementation, but equally important, the audience was engaged in discussing viable solutions and steps forward that will be beneficial for implementation by the agricultural industry and regulators."

Michele Jay-Russell, program manager of WCFS, felt the conference exceeded expectations by bringing together a dynamic group



Karen Ross, Mike Taylor, and Rob Atwill at the Western U.S. Irrigation Water Conference.

of researchers and stakeholders representing key produce production areas from the western U.S. across to the Midwest, eastern Seaboard and southern agricultural regions.

Mike R. Taylor, FDA deputy commissioner for foods and veterinary medicine, and Karen Ross, secretary of the California Department of Food and Agriculture, were among more than 30 guest speakers. Taylor gave an update on the status of the FSMA Proposed Rule for Produce Safety and goals of the regulations for agricultural water quality criteria. Ross presented an update on the impacts of adopting these agricultural water criteria for California agriculture.

"I'm pleased that WCFS could play a role in advancing the discussion about the importance of water in food safety," Atwill said.



Career Night

The UC Davis Student Chapter of the AVMA hosted Career Night in March—enjoying its largest participation ever, with over 200 attendees. Students explored career opportunities with nearly 50 health care vendors, veterinary practices and service providers. Pictured with Dean Lairmore from left to right are Caroline Hogan, Class of 2017, Samantha Lawton, Class of 2017, and Candy Wu, Class 2015.

Previously held in spring, the next Career Night will move to fall—please mark your calendar for September 19, 2014. For more information, contact Janel Lang, director of the Career, Leadership and Wellness Center, at (530) 752-5310 or jalang@ucdavis.edu.

Curriculum Turnover Complete

When the DVM Class of 2015 entered the school, they embarked on an innovative path of training—a new curriculum organized by body system and presented in integrated "blocks" of related material. The revised method provides a broad foundation of knowledge and skills in comparative veterinary medicine, while emphasizing critical thinking, problem-solving, and self-directed learning to maximize students' opportunities for life-long success.

Students also have the opportunity to engage in clinical cases throughout their first three years, enhancing their ability to apply basic science lessons to clinical case material and easing the transition into clinics.

"I really enjoyed the hematology block because of the awesome organization," said Damion Walters, Class of 2015. "I can honestly say that I walked away from that block with a thorough understanding of the main concepts presented to us. I am really looking forward to applying this knowledge as I move forward into my clinical rotations."

The schedule also switched from a quarter to semester system. Beginning with the Class of 2015, the turnover into the new curriculum is complete. Students in the school will now graduate in May rather than June.

Welcome NEW FACULTY

Monica Aleman

Associate Professor of Equine Internal Medicine, Department of Medicine and Epidemiology



Education

- Diplomate, American College of Veterinary Internal Medicine (neurology), 2013
- PhD, UC Davis, 2004
- Diplomate, American College of Veterinary Internal Medicine, 1999
- MVZ, National Autonomous University of Mexico, Mexico City, 1991

Experience

- Resident, UC Davis
- Director, Neuromuscular Disease Laboratory, UC Davis

Special Interests

- Neuromuscular disorders, epilepsy in Arabian foals, and narcolepsy

Claudio Gutierrez

Assistant Professor of Clinical Anatomy, Department of Anatomy, Physiology and Cell Biology



Education

- PhD, Virginia Polytechnic Institute and State University, 2009
- DVM, University of Concepcion, Chile, 1997

Experience

- Instructor, Virginia-Maryland Regional College of Veterinary Medicine, 2012-2014

Special Interests

- Diabetes in pregnancy and prevention of birth defects
- Rodent models of maternal diabetes
- Differing modalities of anatomy teaching and student learning

Duane Robinson

Assistant Professor of Small Animal Orthopedic Surgery, Department of Surgical and Radiological Sciences



Education

- Diplomate, American College of Veterinary Surgeons-Small Animal, 2013
- PhD, University of Minnesota, 2011
- DVM, Ontario Veterinary College, University of Guelph, Canada, 2000

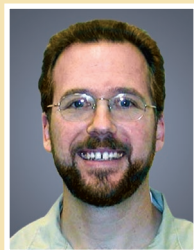
Experience

- Resident, University of Minnesota, 2008-2011
- Assistant Professor, Louisiana State University, 2011-2014

Special Interests

- Orthopedic implant infection
- Small animal orthopedics
- Microbial resistance patterns

Leading the Way



John Adaska, a pathologist, now serves as branch chief of the California Animal Health and Food Safety Laboratory System (CAHFS) in Tulare. He has been a pathologist with the Tulare Lab since his appointment in 1996 and previously served as interim branch chief at the CAHFS Fresno lab in 2009. As chair of the CAHFS South Valley

Laboratory Building Committee, Adaska provides guidance in the construction of the new facility, slated to open in late 2015. He also mentors MPVM students in his role as associate professor of Clinical Pathology, Microbiology & Immunology.



Randy Anderson, a computer scientist with a wealth of IT project management and leadership experience, now serves as Director of Information Technology. He leads the information technology teams at both the dean's office and teaching hospital, creating an organizational structure to best serve the research, teaching, clinical service

and administrative environments of the school. He oversees all aspects of the development and deployment of instructional technologies, application development, clinical information systems, administrative systems, classroom technologies, cyber-security deployment and policy compliance.

Laser Treatments Increase Equine Ophthalmology Offerings

The school's teaching hospital 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 a glaucoma treatment. These procedures have been successful for many years in human and veterinary medicine, and now are available at the school for the first time.

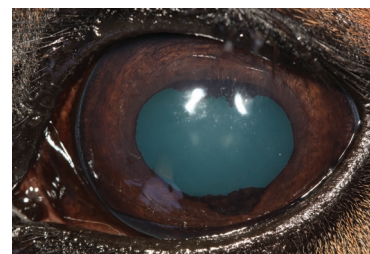
Horses can develop cysts from their iris for no known reason. If left untreated, these cysts can grow and may cause irritation to the horse or become visually obstructive. Horses are also known to become "spooked" by seeing the cyst in their field of vision. Removal of them is now a one-time, outpatient procedure. The laser simply "zaps" the cyst multiple times until it creates a hole causing the cyst to rupture and deflate. 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 pressure, if left untreated, eventually destroys the retina and optic nerve, and ultimately causes blindness. Glaucoma occurs due to an inability for fluid 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



A cyst is clearly visible in the lower section of this horse's eye.



The cyst was successfully removed with a minimally invasive laser treatment.

body which produces the fluid that fills the eye, contributing 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.

The hospital has performed a handful of laser treatments to date, and is already seeing positive results.

The laser can also be used to prevent retinal detachments from worsening. While this condition is very rarely seen in horses, ophthalmologists use the laser to treat other animals with these retinal conditions.

These newer treatments are a preview of the launch of a full-time Equine Ophthalmology Service, slated to begin soon with the addition of Mary Lassaline, one of the nation's leading equine ophthalmology specialists.



Peter A. Barry, a molecular virologist with expertise in the virology and immunology of herpes viruses in nonhuman primates, has been appointed as director of the Center for Comparative Medicine (CCM). In addition to integrating the CCM into the larger UC Davis research mission

by collaborating with various departments and centers on campus, Barry will also actively seek to align research programs with the California National Primate Research Center. Barry is a member of both the Comparative Pathology and Microbiology Graduate Groups at the university. His research interests include development of a nonhuman primate (NHP) model of human cytomegalovirus (HCMV), modeling HCMV vaccine strategies in NHP, translation of NHP studies to human clinical trials and the role of chronic infections in age-related conditions.



Kirsten Gilardi and **Michael Ziccardi** have been appointed as co-directors of the Karen C. Drayer Wildlife Health Center. They will develop and implement a vision for the Wildlife Health Center, outline short and long terms goals and implement both business and strategic plans. They will oversee activities of advisory boards and scientific advisory committees for the centers' high profile programs, such as the Oiled Wildlife Care Network (OWCN), SeaDoc Society, Gorilla Doctors, and PREDICT. Gilardi is also responsible for the administrative stewardship of programs and projects that investigate and respond to emerging issues of critical wildlife population health in transboundary and international areas. Ziccardi directs the OWCN and is also responsible for the stewardship of programs investigating and

responding to emerging issues of critical wildlife population health in regional (e.g. California) and national areas.

Addressing Societal Needs – Developing Meaningful Solutions

The school acts as a major food animal health resource to not only create new knowledge but also share it widely to proactively address societal issues. For example:

A group of 22 faculty engaged in a wide range of **production agriculture projects** participated in a half-day conference earlier this year to share the impact of their research programs with commodity representatives and leaders in the Division of Agriculture and Natural Resources. Topics included infectious disease transmission, microbial contamination of water, pre-harvest food safety, nutrition and nutrient management, animal well-being and much more.

In light of the current drought, faculty in the Western Institute for Food Safety and Security are working with dairy producers to anticipate and mitigate the devastating climate effects on California's dairy industry. A **drought-related outreach effort** which will include workshops, assistance application sessions and on-line web based resources is ramping up with new information being posted regularly at: www.wifss.ucdavis.edu/?page_id=61T.

A recent article published in *Pulse* magazine detailed a number of drought related risks and health factors identified by toxicology faculty affecting dairy and beef cattle. Concerns included water and feed quality, mineral deficiencies such as selenium, copper and phosphorus, and vitamins A and E. There is also an increased incidence of plant poisonings, especially nitrate poisoning, as

The Seven Strategic Goals

- Educate world leaders in academic veterinary medicine
- Perform high-impact transdisciplinary research
- Develop cutting-edge clinical programs
- Promote animal and human well-being
- Maintain school infrastructure and sustainable resources
- Retain excellent faculty and staff
- Promote academic, government, industry collaboration

cattle eat plants available during drought conditions that they would not otherwise find palatable.

The California Animal Health and Food Safety Laboratory System helps to protect the health of livestock and poultry, thereby safeguarding public health with **rapid and reliable diagnoses** for animal diseases affecting humans. Each month an e-newsletter, *CAHFS Connections*, communicates the top projects and activities by species, pathogen, and disease outbreak to keep producers, and the public informed. www.cahfs.ucdavis.edu/about/publications/cahfs_connection.cfm

El Blanco Award Honors Contributions to Animal Health

The El Blanco Award honors animal owners and other benefactors who have made significant contributions to advance clinical veterinary medicine. The school recognized Ron and Sara Malone as recipients of the 2013 El Blanco Award and Susan Koret as the recipient of this year's award.

Ron and Sara Malone, owners of Circle Oak Equine Sports Medicine and Rehabilitation, are long-time friends of the school who are committed to advancing equine health. They established the Mabie Family Endowment to support the operations of the Center for Equine Health—ensuring the center's work to improve the health of horses well into the future. The Malones also supported numerous equine research studies and equipment needs of the Large Animal Clinic. In addition, they have been instrumental in helping the school's clinical research program by welcoming faculty and residents to their facility to further their studies in equine rehabilitation.

Susan Koret, board chair of the Koret Foundation, is a visionary leader devoted to improving animal health. With her strong support, the Koret Foundation has a longstanding dedication to advancing clinical veterinary medicine. Since 1995, the foundation has donated over \$8 million to the school—including support for the Center for Companion Animal Health and most recently, \$5 million over 5 years of additional support for the Koret Shelter Medicine Program and the exchange program with the Hebrew University Veterinary School.



Susan Koret



Ron and Sara Malone

Evening of Gratitude

It was once said, “The most beautiful thing in the world is the conjunction of learning and inspiration.” This thought was evident when scholarship donors and student recipients came together for April’s Evening of Gratitude.

This was a special opportunity to express appreciation to individuals, associations and corporate donors who generously inspired students through scholarship and fellowship support—helping more than 70 percent of the school’s students realize their dreams of becoming veterinarians and scientists.

“This is an outstanding year for our school’s scholarship and fellowship program—with 745 awards amounting to \$6.5 million, a record-breaking amount! We are thrilled with the generosity of our philanthropic partners and their investment in our students,” Dean Michael Lairmore said.

The evening was filled with inspiring stories, tributes and conversations among attendees. The late Mary Silan Seawright was remembered for helping more than 60 students with the scholarships she awarded during her lifetime. As an elementary school teacher for more than 50 years, she was passionate about students and the value of education.

The Robert Haas Family established an endowed scholarship in honor of longtime family-friend, Francisco “Pancho” Lopez for his lifelong dedication to equine health and well-being. Lopez is one of the most widely known and respected figures in the international showjumping community. He wanted to become a veterinarian, but family responsibilities prevented him from fulfilling his ambition. The scholarship will allow its first recipient, Jose Guerrero Cota, Class of 2018, to realize his dream.

The Westminster Kennel Foundation, inspired by their desire to give back, awarded a scholarship to Amy Eberle for her demonstrated interest in breeding and showing pure bred dogs. Eberle has enjoyed training and attending dog shows and handled



Pictured from left to right are Jose Guerrero, Jose Guerrero Cota, scholarship recipient, Francisco “Pancho” Lopez, Gregory Ferraro, director of the Large Animal Clinic, Patricio Lopez and Robert Haas.

her Nova Scotia duck tolling retriever in several dog conformation shows. The scholarship includes an expense-paid trip to attend the prestigious Westminster Kennel Club Show in New York City in February 2015.

Athena Gianopoulos, Class of 2016, was the featured student speaker for the evening. As a recipient of the Peter N. Jones Veterinary Scholarship, Gianopoulos shared stories about her life-long connection to birds and the journey she took to veterinary school. Her heartfelt message of gratitude brought the audience to its feet with applause.

For information about making a gift for scholarships and fellowships, please contact the Office of Development at (530) 752-7024.

Campaign Goal Reached

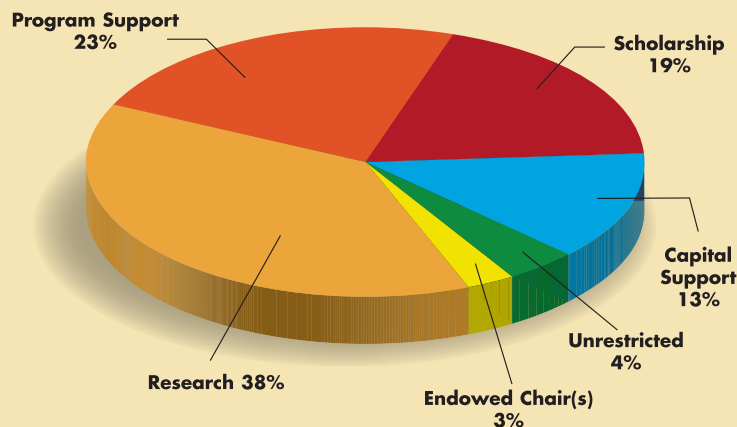
Thanks to the generosity of more than 14,000 donors, the school raised \$160 million in philanthropic gifts as part of The Campaign for UC Davis—an 8-year comprehensive fundraising effort encompassing all campus schools, colleges, and programs. More than half of this total was directed to research and program

support, and nearly 20 percent was used to support students. Gifts of all sizes make a real impact in helping the school advance the health of animals, people and the environment.

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School of Veterinary Medicine – Funds Received by Gift Purpose



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CE Calendar

Veterinary Continuing Education

(530) 752-3905 • Fax: (530) 752-6728
cecenter@ucdavis.edu

From ophthalmology to donkey welfare, the school is committed to life-long learning through its Veterinary Continuing Education. As this program thrives with a variety of nearly 20 new offerings, this newsletter will highlight a few courses, but this list is not complete. **Please visit their website for a comprehensive listing of events at www.vetmed.ucdavis.edu/CE/.**

Sunday, August 24

One Health Symposium, UC Davis

Friday – Sunday, September 5-7

International Conference on Feline Health, UC Davis

Sunday, October 5

22nd Annual Fall Symposium on Recent Advances in Clinical Veterinary Medicine, UC Davis

Friday & Saturday, October 10 & 11

Advanced Oral and Maxillofacial Surgery Lecture Course, Lake Tahoe

Friday & Saturday, October 17-18

Ophthalmology Symposium, Monterey, CA

Saturday & Sunday, October 25-26

Oral and Maxillofacial Surgery In-Depth Laboratory Course, UC Davis (Prerequisite: Advanced Oral and Maxillofacial Surgery Lecture Course)



Four veterinarians from the school recently traveled to China to launch the inaugural International Small Animal Practice Symposium at Nanjing Agricultural University's College of Veterinary Medicine. Andrew Burton, Gina Davis, Jonathan Dear and Karl Jandrey presented the four-day continuing education seminar for a capacity crowd of 50 Chinese veterinarians.

With 80 percent of China's approximately one million veterinarians focused on food animal medicine and working in the food industry, small animal educational opportunities are not as plentiful for Chinese veterinary students as they are in the West. Therefore, CE events like this are extremely important for Chinese veterinarians to learn the latest techniques and pass that knowledge along to their colleagues who want to pursue small animal careers.

With the success of this symposium and the need for more CE in underserved and developing regions of the world, the faculty plan to address these global animal health needs by producing more of these events.

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