We are entering 2014 with a clear vision and enthusiasm for a bright future. Not only did we relocate to a new building in 2013, but we also strategically revamped our organizational structure and solidified our role within the UC Davis School of Veterinary Medicine and the University of California system.

We have received a tremendous lead gift of $2.5 million from Karen and Phil Drayer, who have helped to develop the Wildlife Health Center (WHC) since the mid 1990s, to shepherd us into the next growth phase for the center. The newly named Karen C. Drayer Wildlife Health Center has taken an important step toward sustainability, making it possible to apply our great team of scientists, staff and students to more real-world problems. Wildlife health and conservation are at the heart of what we do, and this huge show of support, which we hope will stimulate commitment from others, is one of many reasons to be excited about the future.

Meanwhile, the One Health Institute (OHI), the administrative home of the WHC, has strengthened our role of working on global health problems at interfaces where wildlife, domestic animals and people come together in changing environments. We believe a holistic approach to answering questions and seeking solutions is the best way to address the needs of society. With your help, we are building a foundation that will allow the next generation to make great strides in research, education and service, whether it be on the UC Davis campus or throughout the world.

In March, we moved out of our old office and lab space into the new VM3B research facility located in the Health Sciences Complex of UC Davis. This gives us stronger visibility in the School of Veterinary Medicine and closer ties to the School of Medicine and other important disciplines on the main campus.

The four-story, 76,000 square-foot building includes an open lab concept aimed at facilitating scientific collaboration and an open floor plan that allows for seamless communication among our team. The move has consolidated our Davis staff in one location for the first time since our center's creation. The building, which we share with several other academic units of the School of Veterinary Medicine, was constructed to LEED Platinum standards thanks to innovative and sustainable planning and design elements aimed at reducing energy demands.

In this year's calendar, we have once again highlighted the WHC's programs with the hope of inspiring you to get involved. The One Health approach to science cannot be pursued without partners, collaborators, innovators and supporters. If you are inspired by the work we're doing, we encourage you to get involved. We are poised for an excellent 2014, and we look forward to sharing it with you.

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Wildlife Health Center faculty and staff moved into the new VM3B research facility in March, uniting our team under one roof on the UC Davis campus.
Karen C. Drayer’s involvement with the UC Davis School of Veterinary Medicine began more than 15 years ago, when a life-long interest in pets and wildlife, especially sea otters, attracted her to our work with otter health in the Monterey Bay.

In 1998, she and her husband Phil partnered with the School of Veterinary Medicine and provided much-needed funds and personal guidance to develop the Wildlife Health Center, which grew to become a center of excellence with an annual budget of more than $21 million.

The Drayers were honored for their avid support of wildlife health research in 2008, when they received the School of Veterinary Medicine’s Distinguished Service Award. As a volunteer, Karen has logged more than 5,000 hours at institutions like the Monterey Bay Aquarium and the Fort Worth Zoo, among others. She has more than 10 years of sea otter rescue and rehabilitation experience and is now also a board member at the Dallas Zoo.

Karen’s service, dedication, passion, and commitment to the Wildlife Health Center and her friends and family make her the perfect namesake for our similarly motivated work, balancing the needs of people and wildlife.

“Karen is an incredible woman who has always dedicated herself to wildlife. From wildlife rehabilitation to zoo work to free ranging species conservation, she has done it all. Karen has generously given of her time, intellectual horsepower, and financial resources to the Wildlife Health Center from day one. There’s not a better person for whom we could name this center.”

— Jonna Mazet, Director

Left to Right: Dean Michael Lairmore, Karen C. Drayer, Jonna Mazet, Phil Drayer and former dean, Bennie Osburn.
Oiled Wildlife Care Network – We respond to oil spills in California marine waters and serve as global leaders in oil spill response and oiled wildlife rescue and rehabilitation. In 2013, we expanded our spill readiness by offering year-round trainings to volunteers and staff and by testing our facilities through extensive full deployment drills. We also conducted advanced research to better understand the effects of oil on wildlife, including post-release tracking of rehabilitated animals like the Western grebe. Photo: Bill Gausman
Emily Whitmer, a 1st year veterinary student, and OWCN staff are investigating the potential effects of chemical dispersants on seabird waterproofing to better inform their use during oil spill response.
We are training future leaders in zoo and wildlife medicine through partnerships with organizations that include the Sacramento Zoo and San Diego Zoo Global, which allow our students and residents to work in real-world classrooms. We help ensure the recovery of endangered species by providing veterinary care to animals like Castro, a 15-year-old Sumatran tiger at the Sacramento Zoo who has undergone chemotherapy for lymphoma. Sumatran tigers are critically endangered, with only about 700 remaining in the wild and 120 in captivity.
UC Davis veterinary students and Zoological Medicine residents at the Sacramento Zoo assisted specialists placing a ureteral stent – a thin flexible tube to help drain urine from the kidney to the bladder around small stones in the tiger’s ureters.
Gorilla Doctors – We are delivering life-saving veterinary care to wild eastern gorillas suffering from human-caused or life-threatening illnesses and injuries. We are the only group providing direct, hands-on care to critically endangered mountain and Grauer’s gorillas in Rwanda, Uganda and the Democratic Republic of Congo. In 2013, we treated snare-related wounds and signs of illness in 19 gorillas while hiking more than 400 times into the forest to monitor the gorillas’ health. Photo: Dawn Zimmerman
Our Gorilla Doctors veterinarians and staff thank supporters for the gear and supplies they provided in 2013, like these donations through Amazon.com, which were shipped to Gorilla Doctors headquarters in Rwanda.

Daylight Savings

St. Patrick’s Day
Health for Animals & Livelihood Improvement Project (HALI) – We are working to assess the effects of shared diseases and water management on health in Tanzania by investigating disease transmission dynamics between livestock, their caretakers, wildlife and the environment. We are also working with pastoralist communities to improve livelihoods by enhancing livestock health and human nutrition education and health service delivery. In 2013, we partnered with Ruaha National Park and Sokoine University of Agriculture to collect critical samples to investigate an emerging skin disease affecting giraffes in the Ruaha landscape. Photo: HALI field team
David Wolking is a Global Operations Officer for the One Health Institute who is working with international programs like HALI and PREDICT to build local capacity for health research and surveillance for infectious diseases in countries such as Tanzania and Nepal.
One Health Diagnostic & Technology Development Lab – When hundreds of bottlenose dolphins began dying along the mid-Atlantic coast of the U.S. in 2013, our lab received samples for testing and was one of the first to identify that the outbreak was associated with Dolphin Morbillivirus. We isolated the virus in culture to confirm the presence of active infections and sequenced the whole genome to better characterize the virus and try to understand its origin. In addition to assisting with response to marine mammal unusual mortality events, our lab continues to test samples from wildlife to detect viruses of pandemic potential to help prevent spillover between wildlife and people.
Nistara Randhawa, a current Ph.D. student, is investigating levels of persistent organic pollutants in California sea lions to assess their temporal trends and association with cancer and infectious diseases.
Hummingbird Health – We are determining the genetic diversity, population structure and taxonomic status of hummingbirds throughout California. To conserve species, you must be able to identify them, which is why our veterinary and graduate students and lab technicians plan to conduct a full genome analysis to determine species differences. We are actively involved with citizen science by engaging members of the public at hummingbird field sites throughout California. Photo: Manfred Kusch
The hummingbird work we have published is in memory of Dr. Loreto Godoy, a Chilean veterinarian and UC Davis Ph.D. student who was killed in an auto accident in June of 2013. An endowed graduate student fellowship is being created in her name.
PREDICT – We are conducting global surveillance to detect and prevent spillover of pathogens of pandemic potential that can move between wildlife and people. As a part of USAID’s Emerging Pandemic Threats program, PREDICT has already discovered more than 250 novel viruses in wildlife and has helped develop diagnostic lab capacity for testing in 20 countries, training more than 1,600 people. Our surveillance focuses on species most likely to serve as reservoirs of disease, like bats and nonhuman primates like the Yellow baboon. Photo: Liz VanWormer
Jessica Smith Schwind, a current Ph.D. candidate, works at animal-human interfaces to improve global disease detection and response. She conducts capacity tracking and surveillance systems research throughout the world.

Ramadan ends
Students for One Health – Our veterinary students and faculty traveled to Nicaragua to study human and animal health in indigenous communities, where diseases can be passed among hunting dogs, wildlife, livestock and humans. Meanwhile, closer to home, our students launched a One Health Clinic project in Knights Landing, California. Students are running a veterinary clinic alongside a medical clinic, helping those in need and fostering a larger discussion about One Health in an underserved community. Photo: James Liu
Joanne Lin, a 3rd year DVM candidate and member of the Students for One Health, is helping enhance human health and well-being by providing care for animals in the underserved agricultural town of Knights Landing, California.
We have been studying mountain lions in southern California for more than a decade, with a special focus on prey animals, causes of mortality, interaction with humans, habitat use and movement. In 2013, we used GPS collars to track the movement of many wild cougars in southern California with the goal of diminishing their main cause of death, which is interactions with humans and their vehicles. Photo: Karen C. Drayer Wildlife Health Center
Jamie Sherman, a 4th year Ph.D. student, studies black bear health and disease ecology using field and laboratory techniques. Her research aims to help better understand, monitor and protect California’s rapidly growing black bear population.
Lead Poisoning in Birds – To protect scavenging wildlife from the threat of lead poisoning, California passed legislation in 2013 that will ban use of lead ammunition when killing wildlife with a firearm. While the law is new, the research that helped shape it has been going on for years and much of it was done by Karen C. Drayer Wildlife Health Center researchers. We have studied the effects of hunting on lead exposure in turkey vultures and golden eagles, and conducted recent investigations into pervasive lead exposure in the California condor. Photo: U.S. Fish and Wildlife Service
Tristan Burgess, a 3rd year Ph.D. student, tracks the movements of California sea otters and follows how habitat, behavior and diet affect infectious disease risk to help understand how coastal development influences otter survival.
SeaDoc Society – We are continuously advancing the health of marine wildlife in the Pacific Northwest through science and outreach. After 14 years of research into killer whale deaths, we found that very few orcas that die wash ashore, meaning only one out of every 50 was being thoroughly examined. We instituted a protocol that has increased necropsies in the Pacific Ocean by 1,600%, which is already impacting recovery efforts. We’re also monitoring diseases in various marine wildlife populations, improving the understanding of key food web issues and brokering collaborative efforts across the international boundary with Canada. 

Photo: Joe Gaydos
Each summer, SeaDoc brings rising 3rd year veterinary students to Orcas Island to assist with research projects and marine mammal stranding response. Our 2013 interns were UCD's Kay Wicinas and Liz Anderson, and Jacq Zier of Colgate University.
Latin American Programs – We increased our presence in Latin America in 2013 through a wide variety of ongoing projects, one of which involves predicting models of disease pathways between guanaco and domestic sheep with hopes of improving guanaco health and agricultural practices in the Patagonian Steppe. We’re also researching lead toxicity in waterfowl, disease prevention in breeding colonies of albatross, a variety of issues affecting different penguin species and high mortality rates in Southern right whales. Photo: John Seb Barber
Fiona Whitton, a 3rd year DVM candidate, is a leader in Students for One Health. She established a Global Health project in rural Nicaragua and hopes to address disease transmission at the wildlife-domestic livestock interface in her career.
Support Our Work — The Karen C. Drayer Wildlife Health Center relies on your support to fulfill our mission. Your contributions support the projects featured in this calendar, as well as many others. Please join us in improving the health and well-being of all species and the welfare of our planet. For more information on how you can help, visit www.wildlifehealthcenter.org or call +1 (530) 752-7024.

Photo: Bill Gausman