DVMs Expand Career Opportunities

Deena Brenner, who hails from Pennsylvania, is completing her residency in zoological medicine at the San Diego Wild Animal Park. Vengai Mavangira of Zimbabwe is working to become board certified in veterinary internal medicine. Santiago Peralta of Colombia is a resident in the Dentistry and Oral Surgery Service.

The three clinicians are among 109 veterinarians from the United States and 19 countries around the globe engaged in school residency programs to further their careers in private practice or academic veterinary medicine.

UC Davis faculty members pioneered many clinical specialties, including veterinary urology, hematology, small and large animal orthopedics, and genetics. The school has also taken the lead in developing newer specialties such as renal medicine, transplant surgery and shelter medicine. While specialty services are in high demand in California and elsewhere, several specialties, such as dentistry, nutrition and behavior, are not widely available.

The School of Veterinary Medicine residency program, which offers advanced training in 31 specialties, is considered to be the largest in the world. Most residencies are aimed toward board certification by one of the many specialty colleges (such as the American College of Veterinary Internal Medicine) that have evolved since the 1970s.

Residents spend two to three years (four for radiology) honing skills, gaining experience and preparing for certification. During the program, residents provide clinical care services, teach veterinary students during cases in progress, lead rounds and give seminar presentations each year.

Continued on page 4
NEW RESEARCH AIMS TO ENHANCE SURVIVAL OF OILED BIRDS

A week after UC Davis veterinary scientists began treating birds injured in the Cosco Busan fuel oil spill in San Francisco Bay last November, they began new studies to improve all oiled birds’ chances for survival.

Wildlife veterinarian Michael Ziccardi, director of the Oiled Wildlife Care Network (OWCN), and spill response veterinarian Greg Massey are leading teams of researchers to investigate technologies such as infrared thermography to detect body heat, microchips to track individual birds undergoing treatment and radio-tracking of post-treatment survival. They are also leading studies of rescue center sanitation, anemia in oiled birds and blood analyses.

Researchers include UC Davis veterinary and postgraduate students, scientists from the United States Geological Survey, United States Fish and Wildlife Service, California Department of Fish and Game’s Office of Oil Spill Prevention and Response, and Humboldt State University.

The OWCN, a network of emergency veterinary clinics and rehabilitation facilities for wild animals injured in oil spills, is managed by the UC Davis Wildlife Health Center.

LEADERSHIP

INCREASING DIVERSITY

Cheryl Scott, RN, MSN, DVM, MPVM, has joined the Office of Student Programs to lead the effort to attract students with diverse backgrounds and career interests to the School of Veterinary Medicine.

The school’s goals are to encourage students with different ethnic, educational, regional and socioeconomic backgrounds to consider veterinary medicine as a career. The aim is to broaden the range of veterinary expertise, form partnerships, collaborate and disseminate information in order to address animal, human and environmental health issues and meet the needs of society.

Dr. Scott says, “As our efforts take effect, I expect to see a new cadre of veterinary professionals who will be the practitioners of the future—those with advanced education, skills and vision in areas such as public health, food safety, environmental health and biosafety in addition to traditional veterinary skills.”

Dr. Scott has experience as a nurse practitioner in human medicine and continues to practice wildlife, emergency and pet hospice veterinary medicine. “As part Native American,” she says, “I appreciate diversity at many levels.”

VETERINARY MEDICINE III B

COMMITMENT MOVES SCHOOL CLOSER TO GOAL

Thanks to the commitment and generosity of friends of the school, progress is being made in the effort to secure the $12 million in private support needed to fund a $95 million construction budget for Veterinary Medicine III B.

The facility, a critical part of the school’s long-range plan, will create laboratory space for veterinary graduate students and faculty/student research teams.

Foster Farms of Livingston, Calif., has pledged $300,000 toward completion of the facility. Ron Foster, president and CEO of Foster Farms, says, “Veterinary Medicine III B is essential to providing the basic research needed to protect California’s food supply. We are pleased to support such a key resource for our industry and other livestock producers.” Mr. Foster has served on the Dean’s External Advisory Council since 1998.

The Frank H. and Eva B. Buck Foundation of Vacaville, Calif., has directed a $200,000 grant to Veterinary Medicine III B. The foundation awards grants to nonprofit organizations working to improve educational resources, particularly in Napa, Solano, Yolo, Sacramento, San Joaquin and Contra Costa counties.

A longtime friend of the school who lives in Northern California has donated $60,000 toward construction of Veterinary Medicine III B. She is also a benefactor to the school’s scholarship program, the Center for Companion Animal Health and the student surgery training program.

“Veterinary Medicine III B is essential to providing the basic research needed to protect California’s food supply.”

Veterinary Medicine III B will provide offices and laboratories for 55 faculty members from Veterinary Medicine Extension and the departments of Anatomy, Physiology and Cell Biology; Molecular Biosciences; and Population Health and Reproduction. The faculty members will work together on basic veterinary research to find answers to complex animal and human health problems.

Support the future of veterinary science! To help make Veterinary Medicine III B a reality, contact Kelly Nimtz or Tom Venturino in the school’s development office at (530) 752-7024.
Foaling: Helping Nature Take Its Course

Although it is ideal to let nature take its course—assuming a mare is given periodic health assessments, nutritional monitoring and routine treatments such as vaccinations and worming—foaling problems can occur quickly and be quite serious.

“The best and most important thing you can do if you want to breed your mare is to find a good veterinarian and establish a working relationship with him or her,” says Gregory Ferraro, director of the Center for Equine Health. The center fosters new knowledge in equine reproduction by funding research studies in areas such as fertility, reproductive physiology and endocrinology, cryopreservation of semen, and the effects of equine herpesvirus-1 on abortion and foal mortality.

Getting a Healthy Start

The William R. Pritchard Veterinary Medical Teaching Hospital provides in-house clinical referrals and farm calls to area horse breeders.

The Equine Reproduction Service is led by Barry Ball, who holds the John P. Hughes Endowed Chair in Equine Reproduction, and Irwin Liu, professor in the Department of Population Health and Reproduction.

Services include reproductive soundness evaluations of mares and stallions, and diagnostic evaluations of infertility. Clinicians collect and evaluate semen, and prepare, store and ship cooled or frozen semen. They also perform ultrasonographic pregnancy diagnosis, twin reduction, obstetrics and foaling management. Practitioners may consult with faculty regarding advanced reproductive procedures such as harvesting, transfer and storage of embryos.

Working hand in hand with the Reproduction Service, the Equine Field Service routinely performs pregnancy examinations and healthy foal exams.

Foaling Emergencies

While only about two percent of mares encounter problems in foaling, what if there is an emergency?

“Equine dystocia (difficult birth) is the most serious and challenging emergency an equine veterinarian is called upon to handle,” says Sharon Spier, chief of the Equine Field Service. The Equine Field Service works in conjunction with the Equine Reproduction Service 24/7 to direct emergency care to both mare and newborn foal.

“Clinicians treat problems such as retained placenta and colic in the mare, and diagnose and treat neonatal foal disorders, including failure of passive transfer (when the foal does not receive colostral antibodies), failure to nurse, angular limb deformities, meconium impactions, ruptured bladder, septicemia, and failure to thrive,” says Dr. Spier.

Intensive Care

The Lucy G. Whittier Neonatal Intensive Care Unit in the teaching hospital provides care for more than 50 critically ill neonates each year.

Veterinary students (both volunteer and paid) on the Foal Team observe and monitor vital signs and assist with fluid therapy, medication administration, physical rehabilitation, oxygen therapy, feeding and other aspects of care.

In the neonatal intensive care unit, there is a ratio of one nurse to each patient. Stalls are customized to pad and support sick foals under the watchful eye of the mare.

Resources

The Horse Report (see October 2005 edition) from the Center for Equine Health:
www.vetmed.ucdavis.edu/ceh/pubs.htm

Vaccination guide for adult horses, foals, weanlings and yearlings:
www.vetmed.ucdavis.edu/ceh/vaccination.htm

Equine Clinical Services:
www.vetmed.ucdavis.edu/large_animal/equine.html

“Intensive care may include mechanical ventilation, blood pressure support, specialized splints and continuous infusion of antibiotics to maintain constant levels of drugs in the youngest patients,” says Gary Magdesian, associate professor in the Department of Medicine and Epidemiology. “Nutrition, including ‘total parenteral nutrition’ when needed, is a really important part of individualized care.”
While many residents pursue clinical training at the William R. Pritchard Veterinary Medical Teaching Hospital (VMTH), others elect to work at the California Animal Health and Food Safety Laboratory—in diagnostic toxicology, microbiology or pathology—or to be based at the Veterinary Medicine Teaching and Research Center in Tulare, which offers a unique environment for dairy production medicine. Some programs, such as Zoological Medicine or Zoo and Wildlife Pathology, encompass multiple venues.

Deena Brenner worked at the VMTH, The Marine Mammal Center in Sausalito, and the Sacramento Zoo—all within the first year of the Zoological Medicine Program. During the second and third years, she has furthered her clinical experience at the San Diego Zoo and the San Diego Wild Animal Park.

“This is an extremely strong and diverse residency program with tremendous mentorship and unique opportunities,” says Dr. Brenner. “The different hospital facilities are amazing, and the collections of animals are hugely diverse. In a day, I can expect to examine, diagnose and treat many different species—from a small rainbow lorikeet to a large Malayan tiger or wildebeest to a massive black rhinoceros. In addition to diagnostic procedures and surgeries, preventative medicine is also a large part of what we do.”

Some residency programs, such as Zoo and Wildlife Pathology, Genetics, Toxicology and Laboratory Animal Medicine, are more academically oriented.

“The Zoo and Wild Animal Pathology Program is one of the few programs in which a zoo pathology program is paired with an academic institution,” says Linda Lowenstine, professor and liaison with the San Diego Zoo.

“We encourage pathology residents, in the zoo and wildlife pathology program as well as domestic and lab animal pathology, to go on to a PhD. This allows them to develop additional research skills to further our knowledge of diseases and disease mechanisms in animals,” she says.

DVMs Expand Career Opportunities
Continued from page 1

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Vengai Mavangira of Zimbabwe, resident in Large Animal Medicine, gains experience with food animals and horses in preparation for certification by the American College of Veterinary Internal Medicine.

“After two years of pathology training here in domestic and non-domestic animal pathology, the resident moves to the Wildlife Disease Laboratories of the Zoological Society of San Diego, which contains the largest and best pathology department of any zoo in the world,” says Dr. Lowenstine.

“Residents in Zoo and Wildlife Pathology have gone on to careers in zoos, academia and commercial diagnostic pathology laboratories. A few have gone into research or positions in pharmaceutical and biotech companies, major employers of veterinary pathologists,” she says.

Continued on next page
New Knowledge

As part of the residency program, residents or “house officers” design and conduct clinically based research studies. Their findings are presented during the school’s annual House Officer Seminar Day. Most resident studies are also published and presented at national scientific meetings.

Through private support of the Center for Companion Animal Health and Center for Equine Health, grants are available to residents for research projects, and pilot studies may become larger studies based on the results.

Professor Philip Kass, who assists residents with the design and analysis of their studies, says, “We’ve got a tremendous track record of residents publishing their research.”

For the research component of her residency, Dr. Brenner explored a new area of avian anesthesia. “My project was the development of a brachial plexus nerve block technique for use in management of pain associated with wing surgery. I had many mentors at UC Davis—Dr. Ray Wack and Dr. Scott Larsen (Zoological Medicine Service), Dr. Peter Pascoe (Anesthesia), and Dr. Peter Dickinson and Colette Williams (Neurology).”

Dr. Brenner is confident that her advanced training will make her competitive for a post-resident position working with captive and free-ranging wildlife. “This program is so strong,” she says, “and I have been cross-trained so well with the different species and different disciplines.”

For more information about veterinary residency programs at UC Davis, visit www.vetmed.ucdavis.edu/teaching.cfm.

Attend House Officer Seminar Day!

All veterinarians are welcome to attend House Officer Seminar Day on March 21, 2008. The annual review of residents’ clinical studies offers parallel tracks for small- and large-animal presentations. Published proceedings and continuing education credit are available. Attendance is free. For more information, contact Esther Finn at (530) 752-2957 or emfinn@ucdavis.edu.

Study Identifies Deadly Chemical Duo

Continued from page 1

acute kidney failure. Cats that received food containing only one or the other of those two chemicals experienced no ill effects.

Results of the study, believed to be the first report on the combined effects of melamine and cyanuric acid in any animal species, were published in the November issue of the Journal of Veterinary Diagnostic Investigation.

“The results of this study demonstrate that a single oral exposure of cats to melamine and cyanuric acid can result in acute kidney failure,” said Dr. Puschner. “The study also provides information that will help veterinarians better diagnose the causes of kidney failure in cats.”

Melamine, a chemical mainly used in the production of certain resins and fertilizers, was the prime suspect during investigation of the 2007 contaminated pet food episode, which resulted in the deaths of dozens of dogs and cats throughout the United States.

Investigators suspected that melamine might have been added to boost the apparent nitrogen content of the pet foods. Researchers were puzzled, however, because melamine was considered to be relatively nontoxic.

Also surprising was the discovery of cyanuric acid in the recalled pet food.

Cyanuric acid, which is structurally related to melamine, is commonly used in swimming pools and hot tubs to slow the breakdown of chlorine in the water.

The research team suggests that, in order to provide more extensive data for risk assessment of contaminated food, further studies are needed to determine the lowest dose of melamine and cyanuric acid that can cause kidney failure in cats.
CALIFORNIA RAPTOR CENTER

GIFTS REBUILD PRE-RELEASE ENCLOSURES

Minimizing contact with humans is an important element in preparing wild birds for release after they have recovered from an injury or been raised as orphans.

A large section of the pre-release cages that house raptors undergoing rehabilitation at the California Raptor Center had to be demolished in early 2007 due to wood rot in the support structures. The enclosure had been deemed structurally unsafe by the UC Davis Institutional Animal Care and Use Committee. Birds being held for release were moved to several makeshift isolation cages.

The estimated cost of replacing the condemned cages was $50,000—and beyond the Raptor Center budget. With a lead gift from Dean’s Advisory Council member and longtime friend of the school, Sue Solomon, PhD, and gifts from other generous donors, the center was able to replace the structure. Eight new cages have been steadily in use since they were completed last fall in time for the expected influx of wild fledglings.
Doris Day animal foundation establishes shelter medicine scholarship

Doris Day established a $75,000 endowed veterinary scholarship in shelter medicine at the UC Davis School of Veterinary Medicine in 2007. The grant was made through the non-profit Doris Day Animal Foundation in memory of her son, Terry Melcher, and in honor of the professionals at the school.

The initial Doris Day and Terry Melcher Scholarship was created with funds donated to the Doris Day Animal Foundation, including a special memorial fund established in 2004, when Melcher passed away.

The annual endowed scholarship, awarded in perpetuity, will support outstanding UC Davis veterinary students working to improve the health and welfare of animals in shelters—a specialty area of study at the school.

Melcher, a singer and songwriter, died of melanoma in 2004. He had helped run the Doris Day Animal Foundation, established in 1998 to aid animals and the people who care for them. The foundation pioneered the landmark event Spay Day USA, which annually coordinates low-cost spay and neuter procedures for dogs and cats.

Over the years, Melcher and his mother often traveled together to the school’s William R. Pritchard Veterinary Medical Teaching Hospital seeking care for sick animals. After Melcher's death, friends and members of the Doris Day Animal Foundation donated money in his memory to be used to improve the welfare of animals.

“I am so grateful to the UC Davis School of Veterinary Medicine for the care and attention to my animals over the years. The veterinarians and staff are miracle workers, and I’m delighted that our gift will help train future veterinarians,” said Miss Day. “I am also enthusiastic about the school’s Koret Shelter Medicine Program and its efforts to improve the health of animals in shelters waiting for new loving homes.”

The UC Davis Koret Shelter Medicine Program advances shelter medicine as a veterinary specialty through research, specialty training and education, and the performance of veterinary service in animal shelters.

The first Doris Day and Terry Melcher Scholarship was presented in May 2007 to senior veterinary student Christi Payne, who last summer was an intern at the Sonoma Humane Society.

“Christi is an outstanding example of the many new veterinarians with the ambition to solve the problem of homeless pets,” says Kate Hurley, director of the Koret Shelter Medicine Program. “This new scholarship validates their work and provides tangible encouragement for them to take on these community veterinary health issues in their careers.”

Dean’s Club Honor Roll

Dean’s Club Executive Circle
Gifts of $5,000 or more
Kent Humber ’82
Lander Veterinary Clinic, Inc.
Michael Ina ’74
Michael O’Brien ’76

Dean’s Club
Gifts of $1,000 or more
Robert Baker ’54
James Bittle ’53
Robert Bradford ’70
Gaylord Brown ’78
George Cardinet ’63
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Deborah Crippen
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Deanna Schwab ’96
Hani Shatila ’73
Marembo Shibuya ’59
John Stuelpmagel ’83
John Switzer ’62
Thomas Talbot ’75
Bud Tennant ’59
William Wetmore ’55

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UC Davis Veterinary Spring Symposium in Southern California
March 2, 2008—UC Irvine

International Symposium on Veterinary Hospice Care
March 28–30, 2008—UC Davis

UC Davis Veterinary Diagnostic Imaging Symposium
April 5–6, 2008—Napa, California

Western Poultry Disease Conference
April 9–12, 2008—Puerto Vallarta, Mexico

Holistic Veterinary Medicine Club Symposium
April 12–13, 2008—UC Davis

UC Davis Veterinary Dentistry Seminar
April 24–May 1, 2008—Maui, Hawaii

Avian & Exotic Medicine Symposium
April 26–27, 2008—UC Davis

Practical Ultrasonography: Beginning/Review
May 3–4, 2008—UC Davis

Veterinary Western Neurology Specialists Symposium
May 16, 2008—UC Davis

Veterinary Neurology Symposium
May 17–18, 2008—UC Davis

Fall Symposium on Recent Advances in Clinical Veterinary Medicine
September 14, 2008—UC Davis

George H. Muller Veterinary Dermatology Seminar in Hawaii
October 29–November 5, 2008
The Big Island, Hawaii

Practical Ultrasonography: Beginning/Review
November 15–16, 2008—UC Davis

Veterinary Endocrinology & Internal Medicine Seminar
December 2–9, 2008—St. Thomas, U.S. Virgin Islands

Programs for RVTS, Veterinary Technicians & Veterinary Assistants

UC Davis Veterinary Spring Symposium in Southern California
March 2, 2008—UC Irvine

International Symposium on Veterinary Hospice Care
March 28–30, 2008—UC Davis

Back to School Veterinary Technician CE Seminar
July 19–20, 2008—UC Davis

Fall Symposium on Recent Advances in Clinical Veterinary Medicine
September 14, 2008—UC Davis