



NEWS

Vol. 27, No. 1, Winter 2010

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BUDGET CRISIS

Voice Your Support for Veterinary Medicine!

As budget planning and the struggle for long-term funding continues, the school has joined in new UC public advocacy efforts.

While lawmakers began to tackle the state's next budget, UC President Mark Yudof launched the "UC for California" advocacy campaign (www.ucforcalifornia.org/uc4ca/home/) calling on all Californians to demand that the state reinvest in higher education.

UC Davis Chancellor Linda Katehi urges the campus, alumni and all friends of UC Davis to communicate to state legislators and the governor that their support of higher education is critical. In a November 17 letter, Katehi wrote, "It is vital that our UC Davis community do what it can to support this statewide effort to protect the integrity of the UC system."

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CLINICAL ONCOLOGY

STEREOTACTIC RADIOSURGERY OFFERS MORE PRECISE, EFFICIENT BRAIN CANCER TREATMENT

Using a head-positioning framework, specialized imaging, computerized treatment plans and an advanced linear accelerator, radiation oncologists at the William R. Pritchard Veterinary Medical Teaching Hospital are treating patients with a new procedure to deliver high doses of radiation to specific tumor sites.

The procedure, stereotactic radiosurgery, allows clinicians to treat brain tumors and other abnormalities more precisely and efficiently than before—and is an important noninvasive alternative to surgery, especially if tumors are located deep within the brain or in close proximity to vital brain areas.

"This procedure's accuracy helps us to spare normal tissue as much as possible and allows us to use a high dose of radiation in one to three sessions to accomplish our treatment objective," says radiation oncologist Michael Kent of the Oncology Service.

Continued on page 3

Michael Kent treats a patient for brain cancer using stereotactic radiosurgery, which delivers higher doses of precisely targeted radiation therapy.

Regenerative Medicine Conference Focuses on Stem Cell Therapy in Horses

The First North American Veterinary Regenerative Medicine Conference for equine veterinary practitioners will take place March 5–6, 2010, in Buellton, Calif.

The two-day meeting, hosted by the Center for Equine Health, Alamo Pintado Equine Medical Center and Rood and Riddle Equine Hospital, will include scientific presentations, demonstrations and discussions of all aspects of stem cell therapy in horses.

The presentations will help veterinarians determine how regenerative medicine fits into their practices.

Gregory Ferraro, director of the Center for Equine Health, says, “The veterinary profession needs standardization of procedures and impartial methods for evaluating the results of stem cell therapy. This meeting offers an ideal opportunity to connect with professionals and establish applied research projects that will move this promising effort forward.”

Twenty-five research scientists and clinicians will present topics in research, clinical trial opportunities, clinical applications and laboratory methodology. The presentations will



Photo: Don Preisler

Equine surgeon and associate professor Larry Galuppo prepares to inject millions of stem cells into a 5-year-old horse suffering from joint damage.

Galuppo's clinical and research team is part of the Regenerative Medicine Laboratory's stem cell therapy program.

help veterinarians determine how regenerative medicine fits into their practices. Register online (www.alamopintado.com/veterinarians/conference/), or for more information, call (888) 688–6510.

About the Hosts

The Center for Equine Health at the UC Davis School of Veterinary Medicine established a five-year research collaboration in 2009 to enhance understanding of stem cells for repairing bone, tendon and ligament injuries in horses, and facilitated the opening of the Regenerative Medicine Laboratory for equine patients (www.vetmed.ucdavis.edu/ceh/events_vets.cfm).

In 2009, Alamo Pintado Equine Medical Center of the Santa Ynez Valley, Calif., opened the first stem cell culture and cryopreservation laboratory in private equine practice.

Rood and Riddle Equine Hospital in Lexington, Ky., founded in 1986, includes more than 50 veterinarians and a staff of 200 dedicated to do the best for the 10,000-plus horses admitted to the hospital annually.

2010 CALENDAR

CENTER FOR CONTINUING PROFESSIONAL EDUCATION AND WILLIAM R. PRITCHARD VETERINARY MEDICAL TEACHING HOSPITAL CONTINUING EDUCATION

Charles Heumphreus Memorial Lecture
February 20, 2010, UC Davis

Sixth Veterinary Neurology Symposium
March 13–14, 2010, UC Davis

Veterinary Practitioner Seminar
October 3, 2010, UC Davis

Annual George H. Muller Veterinary Dermatology Seminar in Hawaii
November 3–10, 2010, Maui, Hawaii

Annual Veterinary Endocrinology & Internal Medicine Seminar
November 30–December 7, 2010
St. Maarten, BVI, Caribbean

UC Davis Veterinary Technician CE Seminar: “Back to School on the Road”
April 24–25, 2010, UC Irvine

UC Davis Veterinary Technician CE Seminar: “Back to School”
June 26–27, 2010, UC Davis

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Voice Your Support

Continued from page 1

In the fall, faculty, students and school officials met with California State Assembly Member Mariko Yamada. She recommended augmenting school efforts to raise awareness in the legislature of the impact of losses in state support on student fees, instructional programs, and the school's ability to address important issues in animal, human and environmental health.

Yamada said that communications to legislators from organized groups, foundations, commodity organizations, advisory boards and other members of the veterinary community can deliver a broad-based message with clout.

Take action!

As a California resident or graduate of the school, your voice is important. Contact your legislators—tell

Your voice is important! Contact your legislators—tell them you want their support for public veterinary education.

them you want their support for public veterinary education—or send a message through your organization about the value of veterinary medicine in California! This “larger voice” can help convince the legislature that higher education and veterinary medicine are worthy of state support.

Dean Bennie Osburn reached out to the California Veterinary Medical Association (CVMA), which contacted Governor Schwarzenegger and sent its own members an “action alert” in October to advocate on behalf of the school.

The Veterinary Medical Teaching Hospital is actively encouraging referral cases to help maintain the quality of instructional and service programs.

Faculty and staff members together are identifying additional sources of financial support such as grant-related income, which represents one way to fund certain positions.

For example, the PREDICT grant (see related story, page 5) received by Jonna Mazet and her team at the Wildlife Health Center will provide salaries for three faculty members.

Overall, 19 faculty members obtained \$16 million from the National Institutes of Health through the federal stimulus program this year.

“As we brace for future cuts, I appreciate all these efforts—and the entrepreneurial spirit to develop new sources of revenue support,” says Dean Osburn.

STEREOTACTIC RADIOSURGERY

Continued from page 1

Other radiotherapy methods require up to 20 radiation sessions.

Stereotactic radiosurgery is used to treat many types of brain tumors—benign or malignant primary or metastatic lesions, and single or multiple tumors. It can be used to help kill tissue left behind after tumor surgery or, in some cases, instead of surgery, particularly where traditional surgery is not possible.

Photo: Don Preisler



First applied in humans, stereotactic radiosurgery shrinks brain and pituitary tumors by damaging tumor-cell DNA. The clinical team, led by Assistant Professor Kent, worked for about two years with medical physicist Randall Holt, PhD, to adapt the technique for veterinary use at the teaching hospital. The procedure is usually done on an outpatient basis.

During treatment, the linear accelerator (LINAC) gantry rotates around the patient, delivering radiation beams through multiple arcs. The LINAC is able to use a focused photon beam, which allows more uniform treatment of larger tumors. It can also be used with a frame that can be repositioned, an advantage for malignant tumors or those in particularly critical locations. Patients generally experience no pain and are up and around within several hours.

“Stereotactic radiosurgery reduces treatment time and avoids multiple applications of anesthesia,” says Kent. “There is immediate



Photo: Paul Primas, RVT

A canine patient is positioned in a head frame for stereotactic radiosurgery. The linear accelerator rotates to deliver radiation beams in precise multiple arcs.

(Left) Michael Kent places arcs of radiation and checks radiation dosage on the dog's treatment plan for a brain tumor.

benefit to the patient along with the potential to extend lives. If we can make treatment easier on the patients and their families, that's a wonderful advantage.”

For more information, visit the VMTH Web site (www.vetmed.ucdavis.edu/vmth/small_animal/oncology/StereotacticRadiosurgery.cfm).

GLOBAL HEALTH

Veterinarian Leads “One Health” Center at New UC Global Health Institute

The University of California launched a new Global Health Institute in November with nearly \$4 million in start-up funding from the Bill & Melinda Gates Foundation. The institute will combine expertise of the 10 UC campuses to solve complex global health problems and meet the health care needs of the world’s most vulnerable populations.

It is becoming very clear that we in the United States both receive and contribute to global health problems.

The new institute includes three multicampus, multidisciplinary centers of expertise. One of the groups, “One Health: Water, Animals, Food and Society,” is led by Patricia Conrad, professor of parasitology at the UC Davis School of Veterinary Medicine, and Anil Deolalikar, economics professor and associate dean of the UC Riverside College of Humanities, Arts and Social Sciences. Also participating are faculty from the Berkeley, Irvine, UCLA, San Diego, UCSF, Santa Barbara and Santa Cruz campuses.

The mission of the center is to address problems arising at the human-water-animal-food interface and to design, implement and evaluate practical, cost-



effective and sustainable solutions in collaboration with local partners.

“It is becoming very clear that we in the United States both receive and contribute to global health problems,” Conrad says. “This year we saw how new diseases like H1N1 influenza are only a short flight away from us in California and how, within days, they can spread worldwide. We also are seeing how financial decisions made in the United States can profoundly impact the entire world’s economy, just as our carbon use can alter the world’s climate.”

Conrad says, “Our students see this clearly, and they want the practical skills, relevant knowledge and opportunities to help solve the resulting health problems that impact vulnerable people in California and globally.” During sabbatical leave, she has begun exploring educational and research collaborations with universities in Uganda.



Above, Patricia Conrad leads an interdisciplinary center whose mission is to address “One Health” problems related to water, animals food and society.

Left, a Ugandan woman carrying her child collects water from a source shared by livestock and other animals.

CALVIN SCHWABE ONE HEALTH PROJECT

LECTURE SERIES FAMILIARIZES STUDENTS WITH ONE HEALTH CONCEPTS AND CAREERS

As the School of Veterinary Medicine takes the reins on several One Health initiatives (see related stories on global health, zoonotic diseases and vectorborne diseases above and on page 5), the school is familiarizing students with holistic health concepts and new veterinary career opportunities.

The Calvin Schwabe One Health Project started the lecture series in 2009. Previous speakers included Dave Jessup and Carol Glaser, who followed their respective career paths in wildlife

medicine and veterinary public health.

A free noon-lecture series continues with the following presentations:

February 22

Mary Croughan, chair of the UC Academic Senate and UCSF professor of obstetrics and gynecology, discusses the role of the Master of Preventive Veterinary Medicine (MPVM) degree and the study of epidemiology in One Health.

March 29

Alonso Aguirre, author and vice president, Conservation Medicine Program Wildlife Trust, talks about his book, *Conservation Medicine: Ecological Health in Practice*.

May 3

Three UC Davis doctoral candidates present “One Health Perspectives” on graduate study in veterinary medicine and science.

ZOONOTIC DISEASE

PREDICTING NEW DISEASES WORLDWIDE

The school's experience in zoonotic disease is being tapped for a new global early warning system named PREDICT, to be developed with funding of up to \$75 million over five years.

PREDICT is one of five initiatives of the U.S. Agency for International Development (USAID), known in combination as the Emerging Pandemic Threats Program. These international projects are aimed at helping prepare for infectious diseases like H1N1 flu, avian flu, SARS and Ebola.

"Anticipating where new diseases may emerge from wild animals, and detecting viruses and other pathogens before they spread among people, give us the best chance to prevent new pandemics," says Jonna Mazet, the UC Davis veterinarian leading PREDICT. Mazet also directs the UC Davis Wildlife Health Center.

A global consortium—Wildlife Conservation Society, Wildlife Trust, Global Viral Forecasting Inc., and Smithsonian Institution—will implement

PREDICT around the world. The concept of "One Health"—that human, animal and environmental health are inextricably linked and should be considered holistically—is a core principle of the PREDICT team.

"To establish and maintain global pathogen surveillance, we will work directly with local governments and conservation organizations to build or expand programs in wildlife and human health. Together we want to stop the next HIV," says Mazet.

The PREDICT team will be active in global hot spots where important wildlife host species have significant interaction with domestic animals and high-density human populations. They may include South America's Amazon Basin, Africa's Congo Basin and neighboring Rift Valley, South Asia's Gangetic Plain, and Southeast Asia. As activities in targeted regions come online, the team will focus on

The chances of novel diseases or even a new pandemic emerging are higher than ever.

detecting disease-causing organisms in wildlife before they spill over into people.

The school will bring Stephen S. Morse of the Columbia University Mailman School of Public Health to be director. Morse said that, historically, pandemics—epidemics that spread around the world—occurred perhaps every 30 to 40 years. "But in our modern world, the chances of novel diseases or even a new pandemic emerging are higher than ever, because of how we live and the extent to which we travel," Morse said.

In a global pandemic today, a quarter of the world's population could be infected, and between 51 million and 81 million people could die, with the toll in the United States exceeding 400,000 deaths.

VECTORBORNE DISEASE

AMERICAN RECOVERY AND REINVESTMENT ACT REACHES SCHOOL

William Reisen, professor of pathology, microbiology and immunology, learned in August that he had received a two-year grant totaling \$1,095,766 from the National Institutes of Health as part of the American Recovery and Reinvestment Act. Stimulus funds of \$14.5 million received as of September 30 have significantly boosted research funding the school receives from government and philanthropic channels. Reisen's grant supports the work of the Center for Vectorborne Disease, where Reisen was appointed director in September.

Predicting West Nile

The center's arbovirus research team is investigating complex interactions among the environmental and biological factors related to the overwintering and spring transmission of West Nile virus. Researchers hope to predict whether the virus will remain at low levels or expand to create outbreaks of human disease the following summer. Accurate predictions will help focus and direct prevention efforts.

The arbovirus research program has focused on combating West Nile virus since its arrival in California in 2003. In collaboration with the California Department of Public Health and the Mosquito and Vector Control Association of California, researchers have tracked the invasion, examined the impact of weather patterns, analyzed bird and mosquito susceptibility to infection, and observed roosting behaviors of jays, crows and magpies throughout the state.

The Center for Vectorborne Disease also provides mosquito testing services and weekly risk estimates to all mosquito control agencies. As a result of this work, the team has developed better ways to rapidly test specimens for infection and share surveillance data with agencies responsible for intervention.

In 2006, for example, NASA satellite data and remote imagery were integrated into the statewide arbovirus surveillance program. Additional investigations focus on viral genetics and pathogenesis as well as improvements in mosquito control methods.

West Nile Virus vaccination information is available online from the Center for Equine Health (www.vetmed.ucdavis.edu/ceh/vaccination.cfm under "Current Vaccination Guidelines").

NEW FACULTY



MARGUERITE KNIPE

Health Science Assistant Clinical Professor of Neurology/Neurosurgery, Veterinary Surgical and Radiological Sciences

EDUCATION

Diplomate, American College of Veterinary Internal Medicine, Neurology, 2002
DVM, UC Davis, 1998

EXPERIENCE

Associate veterinarian, UC Davis, 2006–09
Locum tenens, University of Wisconsin, 2008
Lecturer, neurology/neurosurgery, UC Davis, 2002–06
Veterinary neurologist/neurosurgeon, Animal Care Center, Rohnert Park, 2002–03
Resident, neurology/neurosurgery, UC Davis, 1999–2002
Intern, medicine and surgery, Purdue University, 1998–99

SPECIALTY

Neuroanatomy, neurodiagnostics



WILLIAM CULP

Assistant professor of small animal soft tissue surgery, Surgical and Radiological Sciences

EDUCATION

Diplomate, American College of Veterinary Surgeons, 2009
VMD, University of Pennsylvania, 2004
BS, biology, Geneva College, Pennsylvania, 2000

EXPERIENCE

Fellowship, surgical oncology, Colorado State University, Fort Collins, 2008–09
Residency, small animal surgery, University of Pennsylvania, 2005–08
Internship, small animal surgery, University of Pennsylvania, 2004–05

SPECIALTY

Surgical oncology, interventional radiology



HEIDI ROSSOW

Assistant professor, Population Health and Reproduction

EDUCATION

PhD, nutrition and metabolism, UC Davis, 1997
MS, animal science, UC Davis, 1993
High School teaching credential, science and agriculture, 1987
BS, agricultural science and management, 1984

EXPERIENCE

Associate nutritionist, Agricultural Experiment Station, USDA/Western Human Nutrition Research Center and Department of Nutrition, UC Davis, 2002–09
Lecturer, lactation, UC Davis, 2002
Consultant, computer simulation models of nutrient metabolism for feed industry, USA and New Zealand, 2000–02
Lecturer; agricultural applications in linear programming, diet formulation and farm management; UC Davis; 2001
Postdoctoral fellow, UC Davis, 1997–2000
Staff research associate, Animal Science Extension, UC Davis Department of Animal Science, 1988–94

SPECIALTY

Nutrition; metabolic and nutritional modeling, analysis, and management; ruminant energy metabolism



GERALDINE HUNT

Professor of small animal soft tissue surgery, Surgical and Radiological Sciences

EDUCATION

Member, Royal College of Veterinary Surgeons, 2008
MVSc, University of Sydney, Australia, 1992
PhD, cardiology, University of Sydney, 1989
BVSc (Honors), veterinary medicine, U. Sydney, 1983

EXPERIENCE

Fellow, Australian College of Veterinary Scientists, small animal surgery, 1992–2009
Visiting professor, UC Davis, 2009
Associate professor and consulting specialist in small animal surgery, VTH, U. Sydney, NSW, 2001–08
Consultant surgeon and associate investigator National Health and Medical Research Council (NHMRC), Cardiology Unit, Westmead, Australia, 1994–2008
Director, Faculty of Veterinary Science, University Veterinary Centre, Sydney, Australia, 2003–07
Senior lecturer and head of surgery, Dept. of Clinical Sciences, U. Sydney, 1997–2001
Lecturer in veterinary anatomy, U. Sydney, 1991–97
Specialist surgery consultant, University of Sydney VTH, Rural Veterinary Centre, 1992–94
Residency, small animal surgery, U. Sydney, 1991
Small animal surgeon, private practice, Canberra, 1983–84; Sydney, 1988
Postgraduate research scholar, NHMRC Cardiology Unit, Westmead Hospital, Sydney, 1985–87

SPECIALTY

Small animal soft tissue and orthopedic surgery, cardiovascular surgery; basic and applied anatomy; cardiovascular embryology, neurohistology

VETERINARY MEDICAL TEACHING HOSPITAL

SCHOOL WELCOMES NEW VMTH ADMINISTRATOR



Frank LaBonté

In October the school welcomed Frank LaBonté, MBA and Fellow, American College of Healthcare Executives, as administrator of the William R. Pritchard Veterinary Medical Teaching Hospital.

LaBonté, the chief nonacademic staff member in the hospital, holds responsibilities for business and operational functions that support patient care, client services and relationships with referring veterinarians. LaBonté also provides administrative support of the hospital's missions to teach clinical skills to veterinary students and train specialty residents in Davis, Tulare and San Diego.

Prior to his appointment, LaBonté served six months as a consultant for business management and finance at the teaching hospital. Before coming to UC Davis LaBonté worked three years as hospital and practice administrator for the Veterinary Specialty Hospital, San Diego. He entered the veterinary field with more than 30 years of experience in the administration of hospitals, practices and clinics serving human patients.

THANK YOU NOTES

Supporting the Next Generation of Veterinarians

UC Davis recruits the best and brightest students with a deep commitment to animal health and well-being. While the school's rigorous education program itself is challenging, the biggest hurdle many students face is an enormous financial burden. Declining government funding contributes to fee hikes and poses a barrier to a veterinary education for many people. Upon graduation, many graduates face a student loan debt of more than \$100,000.

Thanks to the generosity of numerous benefactors, the school has been able to provide financial assistance to many students in need.

Thanks to the generosity of numerous benefactors, the school has been able to provide financial assistance to many students in need. By growing our scholarship endowment, we can continue to attract outstanding students and lessen the financial burden they carry when they embark on their careers.

Scholarship Recipient Looks to the Future

I was originally interested in human medicine, but decided I could help both the welfare of animals and their owners as a veterinarian. At UC Davis, I've gained more understanding about the importance of the human-animal bond. By improving the welfare of animals, I believe that veterinarians also can have a great impact on people.

"UC Davis is teaching me high-quality medicine so I can be a successful clinician and help to bring new developments in veterinary medicine to my colleagues and to pet owners.

"I plan to be involved with the community and local veterinary medical association to keep abreast of scientific developments in veterinary medicine and in other professional sciences to promote the One World, One Medicine, One Health initiative.

"Currently, as more veterinarians are retiring, there is a growing demand for veterinarians. Therefore, I also plan to mentor children and youth, with the hope that they will be inspired to pursue a career in veterinary medicine."

—Jonathan Quan, class of 2010



ESTATE GIVING HAS AN ENDURING IMPACT

Rapidly eroding state funding makes fundraising for higher-education important for the long term.

Estate gifts offer a lasting legacy that helps sustain the School of Veterinary Medicine's excellence in teaching, research and community service.

Estate gifts have been—and continue to be—vital support for the school. Funding from estate gifts has supported school priorities that include research, clinical care and scholarships.

Before her death in the early 90s, animal lover Theodora Peigh asked that the bulk of her Reno, Nevada, estate be left to the school for scholarships to advance animal health care. Proceeds from the sale of her multimillion dollar estate established a scholarship endowment that provides up to 250 scholarships each year, ranging from \$2,000 to \$46,000.

To date, more than 2,300 Peigh scholarships have been awarded. Because the endowment was set up in perpetuity, hundreds more students will benefit in years to come—especially significant since rising educational fees and state budget cuts are making a veterinary education otherwise impossible for some prospective students.

Estate gifts such as bequests and charitable remainder trusts have specific tax advantages and often include lifetime income to a beneficiary or beneficiaries named by the donor. Their importance to the ongoing support of School of Veterinary Medicine students, faculty and programs cannot be overstated.

These gift arrangements are an investment in the school's continued excellence—and they allow donors to have a larger philanthropic impact than they may have thought possible.

www.vetmed.ucdavis.edu

Make a gift today!

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