UC Davis Is Partner in Homeland Security Research Center

A new National Center for Foreign Animal and Zoonotic Disease Defense was established April 27 with an $18 million grant from the United States Department of Homeland Security.

The goal of the center is to enhance national security against the threat of foreign animal diseases and zoonotic diseases—ailments that affect both animals and humans.

The partnering institutions will bring to the center the expertise needed in the biological sciences, medicine and veterinary medicine, high-performance computing and economics.

The center is hosted by Texas A&M University, in collaboration with UC Davis, the University of Texas Medical Branch in Galveston and the University of Southern California. The majority of the grant is directed to Texas A&M and UC Davis over three years.

Center researchers will develop new methods to detect, diagnose and immunize against foreign animal diseases and zoonotic diseases. They also will develop databases and models that will help assess disease threats to U.S. animal agriculture.

Research will focus on four diseases—foot and mouth disease; avian influenza; Rift Valley fever, a mosquito-borne virus common in Africa; and brucellosis, a bacterial disease that infects animals and humans.

Collectively, these diseases affect livestock, poultry, wildlife and humans and are considered to be “clear and present threats” to animal health and the stability of the nation’s food supply and economy. These four were chosen because they are models for both viral and bacterial diseases.

“This is a unique opportunity for a consortium of academic veterinary medicine researchers to collaborate with the Department of Homeland Security, the national laboratories and the U.S. Department of Agriculture to prepare for new or re-emerging infectious diseases of animals that may have major impacts on the economy or human health,” says Bennie Osburn, dean of the UC Davis School of Veterinary Medicine.

“The partnering institutions will bring to the center the expertise needed in the biological sciences, medicine and veterinary medicine, high-performance computing and economics,” he says.

During its first year, the center will involve about 12 UC Davis faculty members. Their research and educational programs will focus on diagnostic approaches to identifying disease invasions, diseases such as avian influenza, economics modeling and risk management modeling.

Alumni of School of Veterinary Medicine degree programs who shared their expertise at the International Veterinary Conference in Kuwait last September include (left to right) Linda Logan (PhD ’87), USDA, APHIS, Veterinary Services—Rift Valley fever, foot and mouth disease, rinderpest; Mo Salman (MPVM ’80; PhD ’83), Colorado State University—national animal health; Bennie Osburn (PhD ’65), UC Davis School of Veterinary Medicine—scientific exchange, veterinary college accreditation; Elizabeth Sabin (DVM ’92), AVMA Education and Research Division—veterinary college accreditation; and Leon S. “Sam” Barringer (DVM ’92), Pfizer Technical Services and U.S. Army Veterinary Corps—regulation of dairy product safety.

In an effort to help fellow veterinarians restore veterinary services and education in Afghanistan and Iraq, Dean Bennie Osburn and other U.S. veterinary educators met with colleagues from Kuwait, Iraq and Afghanistan at the first International Veterinary Medical Seminar last September.

The seminar, held in Kuwait, was sponsored by the Humanitarian Operations Center of Kuwait, the U.S. Army Veterinary Corps, U.S. Army Civilian Affairs Veterinary Corps Officers and USDA International Services, as well as a number of veterinary service, pet food and pharmaceutical companies.

Dr. Osburn, president of the American Association of Veterinary Medical Colleges (AAVMC) described the hardships in Afghanistan and Iraq. “The veterinary colleges have been decimated. There is no veterinary service for disease control. Foot and mouth disease is rampant. Our goal is to respond to this great need to improve the care of animals, protect human health and begin to rebuild the veterinary infrastructure in Afghanistan and Iraq.”

The 54 participants developed proposals for short-term scientific exchange and long-term planning to address deficiencies, says Dr. Osburn. On behalf of the AAVMC, Dr. Osburn will co-author a detailed needs assessment in 2005.

“We will identify facilities needs, equipment, teaching materials and training needs for these countries,” Dr. Osburn says. “We will assist our colleagues as they form educational standards and professional associations. We will develop memoranda of understanding, work plans and specific funding proposals to U.S. aid agencies and related organizations to foster MS and PhD training in the United States and collaborations with scientific research programs in Kuwait, Iraq and Afghanistan.”

Dr. Osburn has invited AAVMC member schools to join in the project and contribute to long-term goals.