ANIMAL HEALTH & FOOD SAFETY

CAHFS LAB SYSTEM CERTIFIED AS A REGIONAL SURVEILLANCE LABORATORY

After bovine spongiform encephalopathy (BSE) was found in the United States last December, Agriculture Secretary Ann Veneman announced details March 15 of an expanded national surveillance effort that will check greater numbers of cattle for BSE.

On March 29 the Animal and Plant Health Inspection Service (APHIS) of the United States Department of Agriculture (USDA) announced that the California Animal Health and Food Safety Laboratory System (CAHFS), based at the UC Davis School of Veterinary Medicine, is one of seven laboratories throughout the country approved to carry out a newly developed chemical test on cow brains.

The test detects proteins linked to the disease in just four hours. Previously, the only government-approved method to screen cattle for BSE was microscopic examination of brain tissue, which took several days.

Director Alex Ardans says the CAHFS Lab System already has experience in carrying out high-volume tests for disease surveillance. With facilities in Davis, Turlock, Fresno, Tulare and San Bernardino, the CAHFS Laboratory System conducts 1.8 million diagnostic tests each year with the following objectives:

* Control livestock and poultry disease
* Enhance livestock and poultry health management
* Ensure the safety of foods of animal origin
* Protect people from diseases common to animals and humans
* Monitor and protect equine health and performance
* Develop and validate new methods for rapid, accurate diagnostic testing

The CAHFS Laboratory system, which belongs to a nationwide network that assists APHIS with animal disease testing, will receive federal funding as needed for "high throughput" testing equipment.

Bovine Spongiform Encephalopathy: A Challenge in Veterinary Medicine

The news December 23 that a cow with bovine spongiform encephalopathy (BSE) had been found in the state of Washington shook consumer confidence and rocked the beef and dairy industries, and the discovery has again demonstrated our vulnerability in the United States to emerging animal and zoonotic diseases.

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BSE is more than just a food animal issue—it affects the feeding and handling of livestock, the oversight of regulators responsible for food safety, and the health of non-food species such as cats. The threat of BSE has raised environmental concerns about disposal of "downer" animals and spurred the study of related diseases in wildlife.

"The economic and public health importance of BSE again highlights the need for veterinary medicine in addressing societal issues," says Bennie Osburn, dean of the School of Veterinary Medicine. "The veterinary profession has the responsibility to ensure that all its members are properly trained to recognize prion diseases, which affect both humans and animals."

School faculty are working to assure that veterinary students are well educated about food animal and "foreign animal" diseases. The school is also networking with state and federal agencies to offer research expertise, diagnostic assistance, and new initiatives on emerging zoonoses.

For 14 years the California Animal Health and Food Safety (CAHFS) Laboratory System headquartered at UC Davis has conducted routine surveillance and testing of livestock for neurological diseases. CAHFS is one of 13 state laboratories in the pilot National Animal Health Laboratory Network (NAHLN) begun in 2002 to provide technical training, proficiency testing and equipment for effective response to suspected infectious disease problems, including prion diseases, that threaten the food supply.

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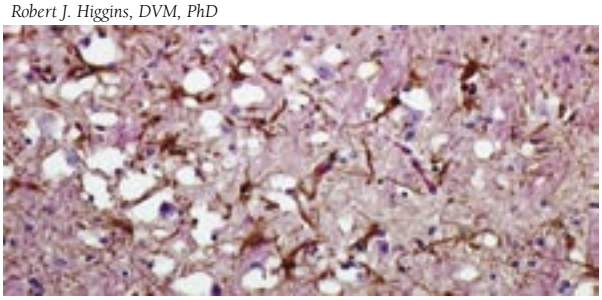
The school also has sent faculty members to the United Kingdom and Iowa (home of the National Veterinary Services Laboratories) for training to recognize BSE in the laboratory, and to the European Union, as part of a U.S. delegation, to review identification and surveillance systems for tracing cattle movement, regulations, and other approaches to BSE prevention.

Robert J. Higgins, DVM, PhD



Cross section of brain tissue showing spongiform changes (holes) and stained (blue) accumulations of abnormal protein from a sheep with the transmissible spongiform encephalopathy known as scrapie.

spongiform encephalopathy