



# Veterinary Research News

## Research Results

### **Study: chronic wasting disease spread through blood, saliva**

Chronic wasting disease might be passed in the blood and saliva of infected deer, according to a Colorado State University-led study published in the Oct. 6 edition of *Science*. Researchers say the findings raise new questions about whether the disease can be spread by blood-sucking insects or social contact between animals.

Evidence also suggests that no tissue from an infected animal can be considered free of infectious prions causing CWD, a degenerative brain disease in cervids characterized by weight loss leading to death.

The research team tested the blood, saliva, feces, and urine of CWD-infected deer to determine how the disease is passed between animals. Infectious prions were discovered in the animals' tonsils as soon as three months after exposure to saliva or blood from an infected deer.

The study was conducted during an 18-month period with financial support from the National Institutes of Health.

## Research in Progress

### **Study seeks sources of *E coli* in California leafy greens**

Scientists are starting a four-year study on the sources of *Escherichia coli* O157:H7 in California's Salinas Valley, site of the recent contamination of spinach and previous contaminations of lettuce.

Some have speculated that livestock or wildlife are the sources of the bacteria in these cases of contamination, said Dr. Edward "Rob" Atwill, co-principal investigator and an expert in waterborne infectious dis-

eases at the University of California-Davis School of Veterinary Medicine.

Dr. Atwill said the investigators will examine livestock and wildlife on the rangeland above the farmland and examine wildlife that live near canals and on the periphery of vegetable fields on the valley floor.

Crews will collect samples of livestock and wildlife droppings; creek, ditch, and irrigation water; farm soil; and lettuce growing on the farms. Scientists will analyze data to identify the vertebrates that are sources of *E coli* O157:H7; assess climate, landscape, and irrigation; and determine whether certain farming practices or environmental factors have any association with the contamination of lettuce.

Scientists hope the study also will help them understand the puzzling timing of recent *E coli* contamination. The bacteria appear more often in Salinas Valley waterways during the winter—when rainstorms wash the bacteria from streets, farms, and rangeland into creeks, streams, sloughs, and rivers. The contamination of fresh vegetables tends to occur during the summer and fall, though.

The U.S. Department of Agriculture is funding the study with a \$1.2 million grant. Scientists from the USDA Agricultural Research Service, the University of California, and the California Department of Health Services are working on the project.

## Funding Announced

### **Morris Animal Foundation funds \$4.3 million in animal health studies**

Morris Animal Foundation has committed to funding \$4.3 million in animal health studies in 2007, up from \$4 million in 2006.

Headquartered in Denver, MAF has funded more than 1,250 humane animal health studies with funds approaching \$50 million since its establishment in 1948.

The \$4.3 million MAF has committed to in 2007 will fund 101 animal health studies, which will be conducted at 49 veterinary schools and colleges, zoologic institutions, and scientific research centers around the world.

Of the 101 studies, 38 will focus on canine health issues such as cancer, cardiovascular diseases, blood disorders, genetics, and urinary diseases. One study will focus on influenza virus infection in dogs in shelters. Dr. Cynda Crawford, a veterinary immunologist at the University of Florida College of Veterinary Medicine, will be the lead investigator in the study. The study results will help in developing effective guidelines for managing respiratory tract infections, particularly influenza, in shelters. Dr. Crawford was among the group of researchers who identified the canine influenza virus.

Morris Animal Foundation will also fund 13 feline health studies that will cover cancer, cardiovascular diseases, gastrointestinal tract diseases, urinary tract disease, and more. One study will focus on asthma in cats. Dr. Carol Norris Reiner, a professor at the University of Missouri-Columbia College of Veterinary Medicine, will be the lead investigator in a study of a treatment called rush immunotherapy, which has shown promise in turning off the abnormal immune response to an allergen.

A selection of 12 equine studies will cover topics such as colic, pain management, genetics, bone and eye diseases, and foal diseases. One study will focus on laminitis.

Dr. Ashley M. Stokes, a professor at Louisiana State University School of Veterinary Medicine, will lead a study on a new technique that may prevent vascular changes in the foot that occur in the earliest stages of the disease's development and stop clinical signs of laminitis. Discoveries made during the study may offer insight into preventing and treating the disease.

Approximately 36 wildlife health studies will feature elephants, wild cats, foxes, wolves, fish, birds, and more. Dr. Michael R. Cranfield, director of the Mountain Gorilla Veterinary Project based at the Maryland Zoo in Baltimore, will lead a study on the prevalence of brucellosis and tuberculosis in regional livestock outside of Mgahingo National Park in Uganda and Parc National des Virunga in the Democratic Republic of the Congo. The livestock could infect nearby mountain gorillas, which range onto the agricultural lands.

Also, MAF will fund several health studies on llamas and alpacas. Topics include gastrointestinal tract diseases, genetics, and nutrition.

For a complete list of the 2007 studies funded by the Morris Animal Foundation, log on to [www.morrisanimalfoundation.org](http://www.morrisanimalfoundation.org), click on Learn, then click on Studies.

## Regulatory Actions

### **USDA issues emergency order to contain fish disease**

The Department of Agriculture's Animal and Plant Health Inspection Service has issued an emergency order Oct. 24 to prevent further spread of viral hemorrhagic septicemia in fish in the Great Lakes region.

The emergency order prohibits importation of several dozen species of live fish from Ontario and Quebec into the United States. The order prohibits interstate movement of these species out of Illinois, Indiana, Michigan, Minnesota, New York, Ohio, Pennsylvania, and Wisconsin.

Viral hemorrhagic septicemia induces destructive clinical signs in fish, including internal hemorrhaging, and death. Outbreaks have occurred in lakes Ontario, St. Clair, and Erie as

well as the St. Lawrence River. A September outbreak occurred in New York's Conesus Lake, a body of water in the Great Lakes watershed but without direct connection to the lower Great Lakes.

Although no one knows how VHS arrived in the Great Lakes region, APHIS will continue to monitor the situation and take actions to prevent further spread.

Because the list of susceptible species is growing, APHIS also will update the emergency order as necessary.

The emergency order and additional information are available at [www.aphis.usda.gov/vs/aqua](http://www.aphis.usda.gov/vs/aqua). An interim rule is likely to follow in early 2007 detailing the new requirements.

### **DEA lists embutramide as schedule III controlled substance**

The Drug Enforcement Administration has placed embutramide into schedule III of the Controlled Substances Act, effective Sept. 28. As a result, the regulatory controls and criminal sanctions of schedule III will be applicable to the manufacture, distribution, dispensing, importation, and exportation of embutramide and products containing embutramide.

In May 2005, the Food and Drug Administration approved a New Animal Drug Application for embutramide for marketing under the trade name Tributame Euthanasia Solution. The product is a combination of embutramide, chloroquine phosphate, and lidocaine for prescription use by intravenous injection for euthanasia of dogs.

According to the DEA, pharmacologic data suggest that the abuse potential of embutramide may be similar to that of other CNS depressants such as barbiturates and their products—schedule III through IV—that are controlled under the CSA.

After a review of available data, including a scheduling recommendation from the Department of Health and Human Services, the DEA filed a Notice of Proposed Rulemaking in the July 29, 2005, Federal Register that proposed placement of embutramide into schedule III of the CSA.

In August 2005, the AVMA submitted a comment to the DEA stating that the Association supported placement of embutramide into schedule III of the CSA to reduce the potential for drug diversion. However, the AVMA stated that it did not support the scheduling of Tributame because it believed the characteristics of the final formulation invalidated the potential for abuse. The Association believes the benefits of a prescription but unscheduled humane euthanasia solution are exceedingly valuable.

According to the DEA, available data suggest that the amounts of cardiotoxin present in the Tributame formulation are insufficient to eliminate the abuse potential of the product.

For further information on the DEA's final rule, contact Christine A. Sannerud, PhD, Chief, Drug and Chemical Evaluation Section, Office of Diversion Control, Drug Enforcement Administration, Washington, DC 20537, *phone*, (202) 307-7183. View the final rule online in the Aug. 29 issue of the Federal Register, available at [www.gpoaccess.gov/fr](http://www.gpoaccess.gov/fr).

To view the AVMA comment to the DEA in response to the July 2005 proposed rule, visit the Advocacy section of the AVMA Web site at [www.avma.org/advocacy](http://www.avma.org/advocacy), click on Regulatory activities, and then click on Practice issue: Making a new embutramide-based euthanasia solution a controlled substance.

## Reports Released

### **USDA releases 2005 Animal Health Report**

The Department of Agriculture has released the 2005 U.S. Animal Health Report, its second annual national overview of the health of domestic animals.

The report addresses the many components of the animal health infrastructure, animal population demographics, approaches to foreign animal disease surveillance, and new initiatives. The USDA will continue updating and refining the publication each year as a method of communicating with stakeholders and the pub-

lic about the status of animal health in the country.

The 2005 U.S. Animal Health Report highlights the National Aquatic Animal Health Plan and revisions to the National Veterinary Accreditation Program.

Industry, state governments, and local governments cooperated in development of the aquatic animal health plan. The purpose of the plan is to foster and support effective and efficient aquaculture, protect the health of wild and cultured aquatic resources in the United States, and meet national and international trade obligations.

The revisions to the veterinary accreditation program focus on life-time education of accredited veterinarians through training modules that will provide updates on policy and procedures along with the latest information on the transmission, recognition, and reporting of exotic and emerging diseases (see *JAVMA*, July 1, 2006, page 12).

The 2005 U.S. Animal Health Report also discusses the National Animal Identification System and important animal health events in 2005—including a case of bovine spongiform encephalopathy in Texas, hurricane response, and incidents of vesicular stomatitis, anthrax, bluetongue, and equine herpesvirus infection.

The report is available at [www.aphis.usda.gov/publications/](http://www.aphis.usda.gov/publications/).

## The Veterinary Community

### Purdue appoints Reed to be dean



Dr. Willie M. Reed

Purdue University has named Dr. Willie M. Reed as dean of the School of Veterinary Medicine, effective Jan. 2, 2007. He succeeds Dr. Elikplimi Asem, who has been serving as interim dean since July 2005.

Most recently, Dr. Reed has served on the faculty at Michigan State University as chairperson of the Department of Pathobiology and Diagnostic Investigation and as director of the Diagnostic Center for Population and Animal Health. He led the expansion of the pathology department and its residency program. He also helped secure funding from the state of Michigan for a \$58 million new diagnostic center that opened in 2003.

Previously, Dr. Reed had been on the Purdue faculty for eight years. He served as an associate professor of avian pathology and as the chief of the Avian Diseases Diagnostic Service. He also earned his doctorate in veterinary pathology from Purdue.

Dr. Reed is a diplomate of the American College of Veterinary Pathologists and the American College of Poultry Veterinarians. He graduated from Tuskegee University College of Veterinary Medicine in 1978.

### University of Missouri names interim dean

The University of Missouri-Columbia has named Dr. Cecil Moore as interim dean of the College of Veterinary Medicine, effective Oct. 13. Dr. Moore replaces Dr. Joe Kornegay, who has accepted a position at the University of North Carolina-Chapel Hill.

Dr. Moore is a professor of ophthalmology at the MU veterinary college, chairman of the Department of Veterinary Medicine and Surgery, and director of the Veterinary Medical Teaching Hospital.

He has served as president of the American Association of Veterinary Clinicians and American College of Veterinary Ophthalmologists. Previously, he was on the faculty at the University of Wisconsin-Madison School of Veterinary Medicine. He also spent six years in private practice after graduating from MU in 1972.

Dr. Kornegay became dean of the MU veterinary college in 1998. His UNC appointments will be in the Gene Therapy Center and in the School of Medicine's Department of Pathology and Laboratory Medicine, with a secondary appointment in the Department of Neurology.

### Institute of Medicine elects Palmer as member

Dr. Guy Palmer has become one of the few veterinarians who are members of the National Academy of Science's Institute of Medicine.

The institute's mission is to serve as adviser to the nation to improve health. Current members elect new members on the basis of professional achievement and commitment to service.

Dr. Palmer is a professor at the Washington State University College of Veterinary Medicine in the Department of Veterinary Microbiology and Pathology.

Dr. Palmer's research has explored what allows some pathogens to persist in a host long after the initial infection, which interactions between a pathogen and its vector lead to efficient transmission and infection, and novel ways of producing vaccines to combat pathogens whose changeable nature makes them moving targets for a host's immune system.

In recent years, Dr. Palmer has focused primarily on the infection biology of *Anaplasma marginale*, a prevalent tickborne bacterial pathogen of cattle. Anaplasmosis causes millions of dollars of losses for owners of cattle herds, particularly in tropical regions but also in the United States and Canada.

Dr. Palmer is a diplomate of the American College of Veterinary Pathologists and a 1980 graduate of Kansas State University College of Veterinary Medicine.