

UNITED STATES ANIMAL HEALTH ASSOCIATION - 2005

RESOLUTION: 11 APPROVED AS AMENDED

SOURCE: COMMITTEE ON INFECTIOUS DISEASES OF HORSES

SUBJECT MATTER: NEED FOR RESEARCH TO DETERMINE THE EFFICACY OF ANTIPROTOZOAL THERAPY FOR CLEARANCE OF INFECTION IN HORSES CHRONICALLY INFECTED WITH *BABESIA CABALLI* OR *BABESIA EQUI*, THE CAUSAL AGENTS FOR PIROPLASMOSIS

DATES: Hershey, Pennsylvania – November 3-9, 2005

BACKGROUND INFORMATION:

For the past 30 years, it has been common practice to treat horses that are infected with equine piroplasmosis (EP) with various therapies. It was widely believed that treatment has been successful in clearing infection, particularly with *Babesia caballi* (*B. caballi*). There is some evidence that treated horses may not in fact have been cleared of the parasite.

Effective treatment of EP-infected horses would be of significant benefit to the horse industry in the United States and many countries worldwide. Research is urgently needed to determine whether anti-protozoal treatment does clear horses of infection with *B. caballi* or *Babesia equi* (*B. equi*).

RESOLUTION:

The United States Animal Health Association (USAHA) requests that the United States Department of Agriculture (USDA), Animal and Plant Health Inspection Service (APHIS), Veterinary Services (VS) in partnership with the USDA, Agriculture Research Service (ARS) pursue urgently needed research into the efficacy of antiprotozoal therapy for clearance of the carrier state in horses chronically infected with *Babesia caballi* (*B. caballi*) and *Babesia equi* (*B. equi*).

RESPONSE:

ANIMAL AND PLANT HEALTH INSPECTION SERVICE, VETERINARY SERVICES (APHIS-VS)

Don Knowles and his team at the United States Department of Agriculture (USDA), Agriculture Research Service, Animal Disease Research Unit and the USDA APHIS National Veterinary Services Laboratories are developing and will initiate in 2006, projects to test the hypothesis that imidocarb or other babesiacides will clear persistent *B. caballi* or *B. equi* infections and/or impact transmissibility by *Dermacentor nitens* is as follows:

1. Tick transmit via *D. nitens* a Caribbean isolate of *B. caballi* and a field strain of *B. equi* to horses (number of horses is being determined based on statistical power of the outcome).
2. Determine baseline levels of *B. caballi* and *B. equi* in persistently infected horses by real time PCR and anti-*B. caballi* and *B. equi* antibody levels by cELISA, CFT and IFA . Due to the sequestration of *B. caballi* and *B. equi* in small capillaries we will also obtain blood from a mucosal surface (location to be determined) to measure parasite load by real time PCR.
3. Treat horses with imidocarb and other babesiacides (*B. equi*) and track parasitemia by real time PCR and antibody levels by cELISA and CFT.
4. Post treatment ability of *Dermacentor nitensto* acquire and transmit infection will be tested at least at two (2) time points.

5. Should tick transmission, serology and PCR indicate that horses are cleared of infection; horses will be splenectomized as the final test of clearance.

AGRICULTURAL RESEARCH SERVICE (ARS)

ARS fully supports research projects that will support the U.S. equine industries. Research to assess the efficacy of antiprotozoal therapy for equine babesiosis has already been initiated and we expect to be able to provide a progress report at the 2006 USAHA Annual Convention.