

RESEARCH UPDATE 3

Ongoing and recent projects funded by Grayson-Jockey Club Research Foundation

Dr. Sue Holcombe of Michigan State University Discusses Her Project on How Ethyl Pyruvate Helps Horses with Toxemia

Horses with colic, diarrhea, retained placenta, and even pneumonia can suffer from sepsis and toxemia. Toxins are released by the body and by infecting bacteria. These toxins cause illness, organ injury including laminitis, and at times, death. Treatments for sepsis and toxemia are limited to antibiotics, Banamine, and fluid therapy.



Despite these treatments, horses are victims of toxemia and may die. Ethyl pyruvate is an anti-inflammatory agent used in research models of disease. **Animals that might have died due to the severity of the illness survived when they received ethyl pyruvate.** In fact, ethyl pyruvate improved survival and organ function in models of severe sepsis and gastrointestinal injury.

Horses were treated with ethyl pyruvate, Banamine or a saline placebo. Both ethyl pyruvate and Banamine reduced signs of illness and colic in the horses. **Ethyl pyruvate was superior to Banamine at reducing specific toxins infection.** The results of the current study supported by the Grayson Jockey Club Research Foundation showed that ethyl pyruvate may be a useful treatment in horses with colic or illness complicated by sepsis and toxemia.