

SPOTLIGHT

STOPPING THE SPREAD OF EHV

**Grayson-Jockey Club Research Foundation
is committed to bringing an EHV vaccine
to the equine community**

WORDS: APRIL BILODEAU

IF THERE'S one thing that every horse person can agree on, it's that the health and safety of our animals is top priority.

While veterinarians are well-informed on most common equine illnesses, there are still a lot of unanswered questions—and, more importantly, solutions—to be found for contagious infections. While outbreaks of EHV in horses have been in the news as of late, Grayson-Jockey Club Research Foundation has actually been working toward a vaccine for the virus long before the headlines.

Grayson-Jockey Club Research Foundation in Lexington, KY, is a 501c3 organization whose sole mission is to aid in the funding of veterinary research programs to find answers to the questions that still remain in the world of horse health. It is the nation's leading source of private funding for equine medical research, since 1940, providing more than \$40 million of funding to more than 426 projects at 45 universities around the world.



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-JAIME HAYDON, GRAYSON-JOCKEY CLUB PRESIDENT



ABOVE, FROM TOP: Grayson-funded researcher and University of Georgia Clinical Associate, Professor Dr. Rachel Reed, and her assistant monitor a patient; Grayson research Advisory Committee Chairman Dr. Stephen Reed from Rood & Riddle Equine Hospital conducts a wellness examine at Rood and Riddle Equine Hospital

The organization started more than 80 years ago, and while the name may make you think of Thoroughbreds, the foundation is deep rooted in all breeds, sizes, shapes, and disciplines.

“Equine disease just attacks, that's how it works;” Jamie Haydon, president of Grayson-Jockey Club tells *The Plaid Horse*. “It doesn't ask if you're an Arabian or not.”

Grayson Foundation merged with The Jockey Club in the 1980s. Bringing the two organizations together made it possible to open up the research across all aspects of the horse.

Dr. Johnny Mac Smith, the A. Gary Lavin Research Chair of the organization, is a founding partner of Peterson Smith Equine in Ocala, FL. He has served as a key member of the Grayson-Jockey Club Research Foundation team for the last 15 years.

Smith is actively involved in the pursuit of research for equine diseases that travel through any barn, whether the racing stable or the show horse barn.

A FOCUS ON EHV

One particular area of continued research is for EHV, otherwise known as Equine Herpes Virus.

The highly contagious disease has garnered attention for decades with the question still remaining on when a vaccine will be available.

In 1999, Grayson-Jockey Club Research Foundation began looking for an answer to that question by beginning their research for a vaccine.

Since then, there have been several grants to help find different ways to treat the disease and determine why this virus is so persistent within the horse population.

“99.9% of horses have the virus already;” says Dr. Smith, going on to explain that the virus lays dormant in a horse's system. “There has been a lot of funding towards how the virus turns off the horse's immune system ... where it hides within the horse.”

SEARCHING FOR PREVENTION

In 2007, an Oklahoma State University researcher started working with antiviral drugs determining efficacy and protocols to combat the EHV virus.

The process started with the aim of preventing EHM, the deadly form of EHV that causes neurological problems. They found that with the proper antivirals and timing in the initial stages, they could prevent the development of EHM.

“We've made several major steps in the treatment of it but now we are back to working on preventing the disease altogether.” says Dr. Smith.

A couple years ago, Dr. John Ballantyne and Fargo-Moorhead Area Foundation, approached Grayson-Jockey Club Research Foundation about

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their focus on EHV. Dr. Ballantyne owns and races Thoroughbreds through his NBS Stables and is the co-founder of the biotech company Aldevron.

The Fargo-Moorhead Area Foundation went on to donate \$2,000,000 to Grayson to fund research towards developing a vaccine for the virus. The funding is currently being put towards two studies taking place at Michigan State University and Cornell University.

The study at Michigan State University, which will take over the course of three years, is designed to develop a novel mRNA-based EHV vaccine that protects horses from EHV -1 and will also likely cross-protect against other equine herpes viruses.

At Cornell University, Dr. Bettina Wagner has a two year grant from the organization for the study, “A Novel DNA Vaccine Platform to Control EHV-1 AND EHV-4.” Unlike the study at Michigan State University, this study is hoping to develop a DNA vaccine.

HELPING ALL ANIMALS

Not only is the goal to prevent all equine herpes viruses, but there is discussion surrounding whether or not the vaccine will be able to help other animals.

“The vaccine is going to need to cover all bases of the virus.” says Haydon. “The scope of the industry is so much smaller than dogs or cats so we really have to show that it covers all bases, and possibly even for multiple species.”

While a vaccine may be the best way to prevent the disease from spreading among horses, there are several things that you can do at home to reduce the risk of spreading any illness.

“Veterinarians have a good understanding of how to handle infectious diseases but it's important for everyone to follow basic elements of how not to spread disease,” says Smith. “For example, don't use the same rag when wiping horses' mouths, don't use common water sources. Little things make a big difference.” Says Haydon: “It's unbelievable how far we've come, but we still have a ways to go.”



The staff at the University of Pennsylvania conducts an examination for a Grayson funded project

Visit grayson-jockeyclub.org for more information on the Grayson-Jockey Club Research Foundation