

Equine Respiratory Biosurveillance Program Newsletter

BROUGHT TO YOU BY MERCK ANIMAL HEALTH AND THE UNIVERSITY OF CALIFORNIA, DAVIS SCHOOL OF VETERINARY MEDICINE

Why the Program Matters to Your Clinic

Merck Animal Health's biosurveillance program has been helping veterinarians across the U.S. more effectively and efficiently diagnose and treat respiratory disease since 2008.

"Infections of the upper respiratory tract are among the most common medical entities encountered by veterinarians," says lead researcher and UC Davis professor, Nicola Pusterla, D.V.M., Dipl. ACVIM. "This study has been distributing information about a common problem for all equine veterinarians for nearly 7 years. The number of cases enrolled and the ongoing longitudinal aspect of the study is very unique."

Pusterla says the study should serve as a reminder that all respiratory pathogens are highly contagious and proper measures should be taken to prevent their spread and transmission, including an accurate diagnosis.

"Testing these infected animals allows us to determine the causative agent associated with the outbreak and arms veterinarians with an accurate diagnosis so they can better educate their clients on preventative measures to avoid further spread of the disease," Pusterla says. "Owners tend to forget basic biosecurity measures when their horses are healthy and might not be diligent enough when their horses become sick."

The data from this biosurveillance program has revealed equine herpesvirus-4 and equine influenza virus as the most prevalent infectious upper respiratory pathogens. Pusterla says the study results can help support the veterinarian's advice to remain vigilant against all respiratory diseases in at-risk horses, not just those making the news headlines and social media conversation circles.

"Not only does this study gather and disseminate epidemiological information, it also helps us improve our management and treatment protocols, as well as remain vigilant for novel pathogens," Pusterla says.

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*-Nicola Pusterla,
D.V.M., Dipl. ACVIM*

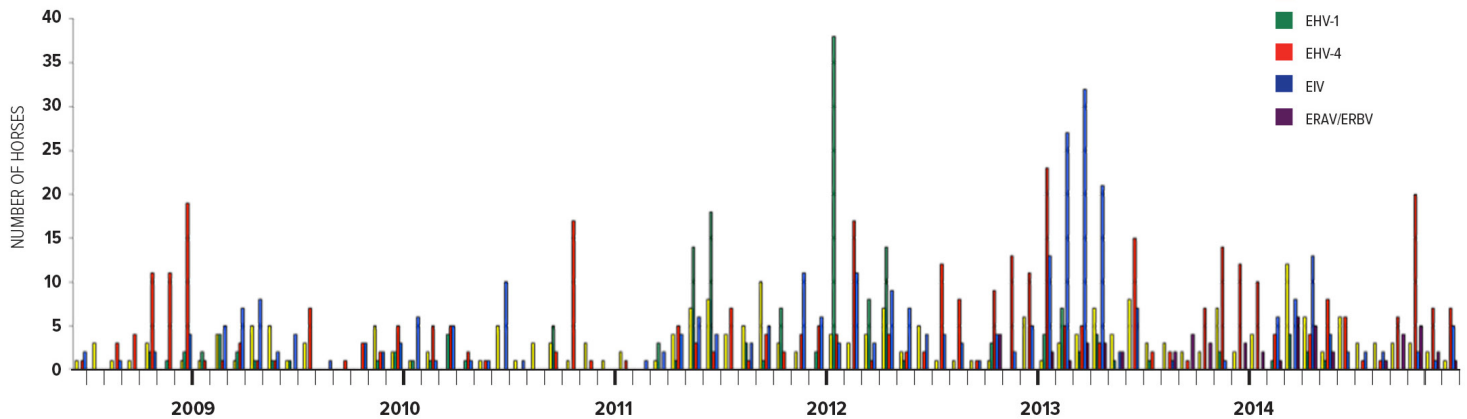
About the Program

Since 2008, Merck Animal Health has been conducting an ongoing, voluntary equine biosurveillance program to study the prevalence and epidemiology of relevant viral and bacterial respiratory pathogens. More than 4,700 samples from U.S. equids of all ages, genders and breeds presenting with fever and signs of acute upper respiratory disease and/or acute neurological disease have been collected since the study began. Samples are submitted by participating Merck Animal Health customer clinics and tested via quantitative PCR at the University of California, Davis School of Veterinary Medicine (UC Davis). To be eligible for testing, horses must have an unexplained fever ($T \geq 101.5^{\circ}\text{F}$) AND one or more of the following signs: Depression, nasal discharge, cough, and/or acute onset of neurologic disease. The results are then returned to the Merck Animal Health customer within 24 hours and provide invaluable diagnostic and treatment information.

Four-Fold Purpose:

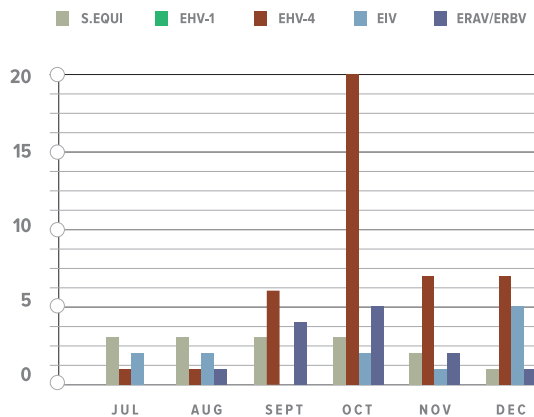
- 1) To provide a valuable diagnostic tool to participating Merck Animal Health customers to assist in obtaining an accurate and timely diagnosis during an acute respiratory disease outbreak so they can provide optimal treatment, quarantine and vaccination strategies to their clients and patients
- 2) To provide the horse industry with a better understanding of the prevalence and epidemiology of these respiratory pathogens
- 3) To identify and monitor the current circulating strains of major equine respiratory pathogens
- 4) To evaluate the efficacy of current vaccination protocols

Disease Trends Since Program Inception



Of the 4,711 samples submitted since the program's inception, EHV-4 and EIV have been the most prevalent infectious upper respiratory diseases.

Disease Trends from July to December 2014



From July to December 2014, EHV-4 was still the most prevalent infectious upper respiratory disease reported, followed by *S. equi*.

Relevant Supporting Research

For more information on the latest respiratory disease published research from Merck Animal Health, click on the links below.

- 1) ["Voluntary Surveillance Program for Equine Influenza Virus in the United States from 2010 to 2013"](#)
- 2) ["Voluntary surveillance program for important equine infectious respiratory pathogens in the United States"](#)
- 3) ["Surveillance programme for important equine infectious respiratory pathogens in the USA"](#)

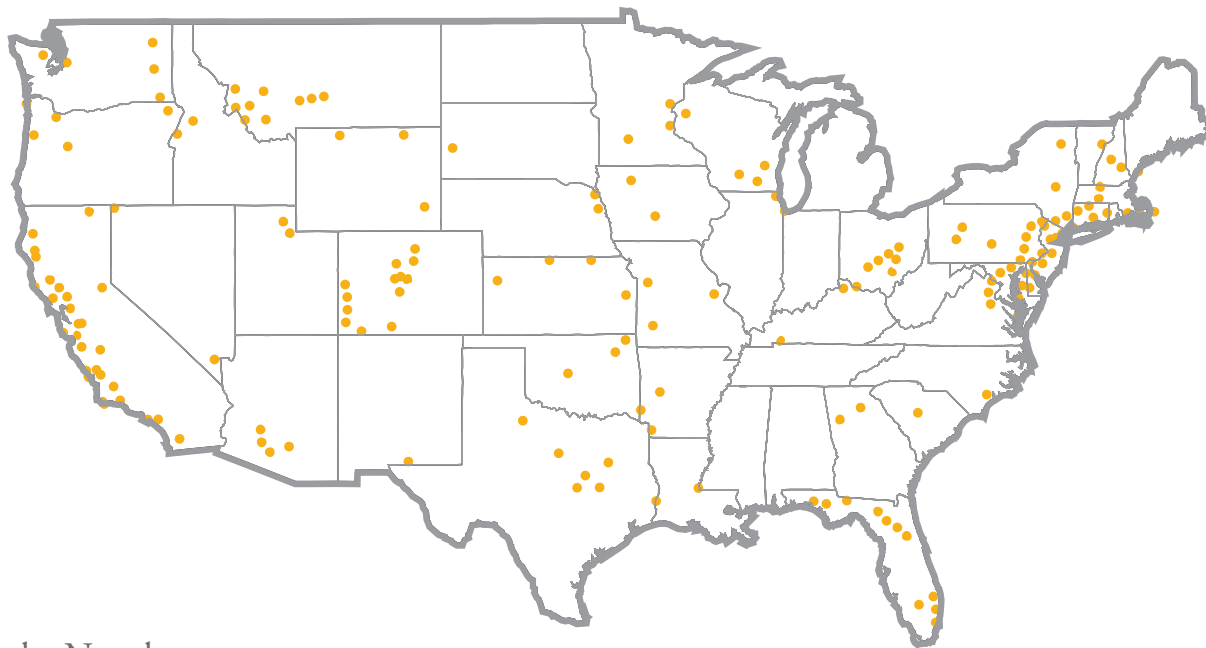
"Infectious respiratory disease is a significant component of my internal medicine practice. The respiratory biosurveillance program offered by Merck Animal Health provides a key component of rapid infectious disease control: Rapid results reporting. I utilize this program with every horse that meets the criteria for sample submission, allowing me to provide the best treatment, training and quarantine recommendations for patients.

I will continue to use the diagnostic services offered by Merck Animal Health so my patients receive an accurate and timely diagnosis. Additionally, I support the program's compilation and monitoring of infectious respiratory disease prevalence."

– Phoebe A. Smith, D.V.M., Dipl. ACVIM,
Riviera Equine Internal Medicine & Consulting

Participating Merck Animal Health Clinics

Approximately 250 Merck Animal Health customer clinics are enrolled in this biosurveillance program. To date, those clinics have submitted more than 4,700 samples and have been provided real-time PCR results courtesy of Merck Animal Health.



About the Newsletter

This bi-annual newsletter is being sent as a value-added service to clinics enrolled in the biosurveillance program. Merck Animal Health is providing this newsletter to customer veterinarians to help them stay up-to-date on the latest trends and historical information the study has yielded to date.

If you have questions about the program, please call our technical services team at (866) 349-3497 or email one of the technical services veterinarians at the addresses listed below.

Here to Help

The Merck Animal Health technical services team is passionate about the information this study is arming practitioners with and the insight it is giving the equine veterinary community as a whole. Technical veterinary advice, interpretation and case management support will be provided by Nicola Pusterla, DVM, Department of Medicine and Epidemiology, UC Davis, and Merck Equine Veterinary Technical Services (Drs. Barnett, Vaala, MacKenzie, Gaughan, Craig and Chappell).

Once again, if you have questions, or would like more information on this program, please don't hesitate to reach out to the team.

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