

Merck Animal Health Equine Biosurveillance Program

Keeping You at the Forefront of Infectious Upper Respiratory Disease

During an acute outbreak of infectious upper respiratory disease, an accurate and timely diagnosis is critical to ensure proper treatment and make timely biosecurity decisions. Pathogen identification can also impact future vaccination protocols.

Real-Time PCR Testing

The Merck Animal Health Equine Biosurveillance Program provides quantitative PCR testing for six infectious upper respiratory disease pathogens:

- Equine Herpesvirus Types 1 and 4 (EHV-1, EHV-4)
- Equine Influenza Virus (EIV)
- *Streptococcus equi* subspecies *equi* (strangles)
- Equine Rhinitis A/B viruses (ERAV/ERBV)

**Results are provided within 24 hours,
allowing participating veterinarians to:**

- Provide a timely and accurate diagnosis for clients
- Prescribe optimal treatment for horses with infectious upper respiratory disease
- Make recommendations about vaccination, management and biosecurity during an infectious respiratory disease outbreak—including the potential need for quarantine
- Evaluate the efficacy of current vaccination protocols

To Learn More

Scan the QR code to learn more and access current and past program newsletters, contact your Merck Animal Health equine sales representative or call 866-349-3497.



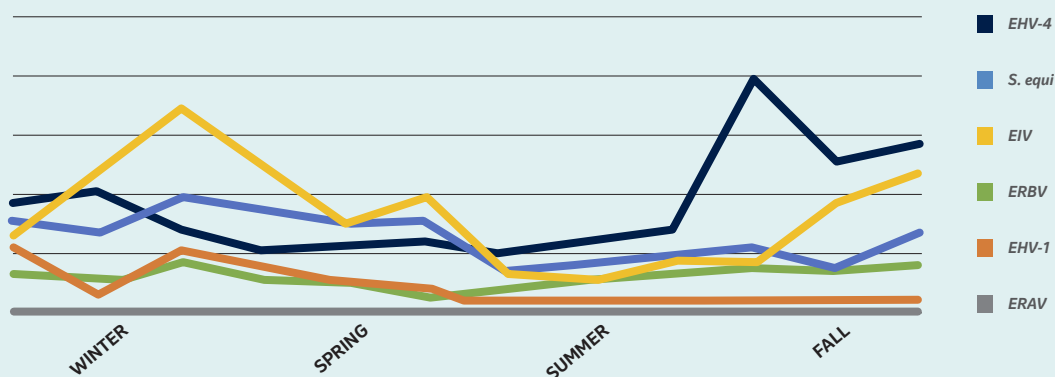
The Largest U.S. Equine Biosurveillance Program

Providing invaluable epidemiologic information to the horse industry by identifying and monitoring current circulating strains of major equine respiratory pathogens.

Since 2008, Merck Animal Health in collaboration with the University of California, Davis, Equine Infectious Disease Research Laboratory, has been conducting a voluntary longitudinal study of the prevalence and epidemiology of relevant viral and bacterial respiratory pathogens in horses.

- The largest contemporary biosurveillance data set in the United States
- Documented important influenza antigenic drift
- Houses one of the largest collections of equine influenza isolates
- Multiple published research papers and numerous national and international abstract presentations
- Birthplace of Florida '13 vaccine strain

Seasonal Incidence of Equine Infectious Upper Respiratory Disease



Cumulative program data collected since 2008 demonstrates that EHV-4 continues to be more prevalent in the fall months, in contrast to the other respiratory pathogens (especially EIV) that are more common in the winter and spring months.

Published Research

1. Pusterla, N.; James, K.; Barnum, S.; Bain, F.; Barnett, D.C.; Chappell, D.; Gaughan, E.; Craig, B.; Schneider, C.; Vaala, W. Frequency of Detection and Prevalence Factors Associated with Common Respiratory Pathogens in Equids with Acute Onset of Fever and/or Respiratory Signs (2008–2021). *Pathogens* 2022, 11, 759. <https://doi.org/10.3390/pathogens11070759>
2. Vaala, W.; Barnett, D.C.; James, K.; Chappell, D.; Craig, B.; Gaughan, E.; Bain, F.; Barnum, S.M.; Pusterla, N. Prevalence Factors Associated with Equine Influenza Virus Infection in Equids with Upper Respiratory Tract Infection from 2008 to 2019. *AAEP Proceedings*. 2019 Vol 65.
3. James, K.; Vaala, W.; Chappell, D.; Barnett, D.C.; Gaughan, E.; Craig, B.; Bain, F.; Pusterla, N. Prevalence Factors Associated with EHV-2/5 Among Equines with Signs of Upper Respiratory Infection in the US. *ACVIM 2017 abstract*.
4. Pusterla, N.; Mapes, S.; Akana, N.; Barnett, D.C.; Mackenzie, C.; Gaughan, E.; Craig, B.; Chappell, D.; Vaala, W. Prevalence factors associated with equine herpesvirus type 1 infection in equids with upper respiratory tract infection and/or acute onset of neurological signs from 2008 to 2014. *Vet Rec*. 2015; doi: 10.1136/vr.103424.
5. Pusterla, N.; Kass, P.H.; Mapes, S.; Wademan, C.; Akana, N.; Barnett, D.C.; Mackenzie, C.; Vaala, W. Voluntary Surveillance Program for Equine Influenza Virus in the United States from 2010 to 2013. *J Vet Intern Med* 2015; 29:417-422.
6. Pusterla, N.; Kass, P.H.; Mapes, S.; Johnson, C.; Barnett, D.C.; Vaala, W., et. al. Surveillance programme for important equine infectious respiratory pathogens in the USA. *Vet Rec*. 2011 July 2;169(1):12. doi: 0.1136/vr.d2157.
7. Pusterla, N.; Kass, P.H.; Mapes, S.; Johnson, C.; Barnett, D.C.; Vaala, W.; Gutierrez, C., et. al. Voluntary surveillance program for important equine infectious respiratory pathogens in the United States. *AAEP Proceedings* 2010.