



## Gamma Herpes 2 and 5: what's new?

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The equine gamma herpesviruses 2 and 5 (EHV-2 and -5) have commonly been observed in the equine population. However, their role in various clinical diseases as yet is unclear, since clinical signs lack specificity and direct causal evidence is lacking. Furthermore, EHV-2 and EHV-5 have commonly been observed in healthy equine populations (2) (see Figure 1) presumed in studies to be low to nonpathogenic for horses (2).

However, other reports have increasingly linked gamma herpesviruses with various disease states, with EHV-2 being incriminated for mild respiratory disease (3) tracheal inflammation and keratoconjunctivitis, while EHV-5 has been linked to multinodular pulmonary fibrosis (EMPF) (1). Earlier work also suggested EHV-2 infections may have an association with poor athletic performance in race horses. While both EHV-2 and EHV-5 are commonly observed in all age groups of equine population, thus far it has not been identified whether factors exist that associate them with disease versus them acting simply as passive bystanders.

This seminar will summarize the various disease states linked with the presence of EHV-2 and/or 5 in the horse, and contrast the actual evidence for these viruses being pathogenic, using results from recent long term prospective studies of the dynamics of these viruses in clinically healthy horses.

### References:

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2. Back H, Ullman K, Treiberg Berndtsson L, Riihimäki M, Penell J, Ståhl K, Valarcher J-F, Pringle J. Viral load in nasal secretion of equine herpesviruses 2 and 5 in actively racing Standardbred trotters: temporal relationship of shedding to clinical findings and poor performance. *Vet Micro* 2015 Sep 30;179(3-4):142-8
3. Dunowska, M., Wilks, C.R., Studdert, M.J., Meers, J., 2002. Viruses associated with outbreaks of equine respiratory disease in New Zealand. *New Zealand Veterinary Journal* 50, 132-139.

Figure 1 a and b. Shedding of gamma herpes virus 2 and 5 in 63 horses followed clinically and virologically for 13 months, as represented by two horses in the group.

