crows. An infectious clone, based on WNV lineage 1 IS-98-ST1, a highly neuroinvasive strain, harbouring $NS3_{249P}$, was constructed (Bahuon et al., 2012) and a $NS3P_{249T}$ mutant was generated by directed mutagenesis. We aimed at deciphering the properties of recombinant viral particles in vitro and in vivo, in mammalian and bird models (Dridi et al., 2013). In Vero cells, virus with a $NS3_{249T}$ protein proved to replicate at a slower rate than the parental $NS3_{249P}$ virus. When injected intraperitoneally in female Balb c/J mice, parental virus was found to be highly virulent (Lethal Dose 50 (LD50) < 1 pfu), while only 4 out of 20 animals infected with the $NS3_{249T}$ virus succumbed, regardless of the initial infecting dose (1-103pfu). Mice infected with $NS3_{249T}$ virus experienced milder clinical and virological outcomes, with delayed and non fatal weight loss as well as decreased viremia 4 days pi (1.4x103 vs 3.2x104 viral copies/mL blood). Birds, e.g. one-day old chicks and young corvids (Corvus corone), also indicated that $NS3_{249T}$ virus was attenuated for model and susceptible European birds. In particular, in young crows, 16.7% (1/6) animals died after subcutaneous infection with $NS3_{249T}$ virus whereas a 100% lethality (7/7) was observed with parental $NS3_{249P}$ virus. The presence of a Proline residue at position 249 in NS3 appears as a primary determinant for WNV virulence in wild birds, as well as in mammals and could be a genetic factor accounting for enhanced reporting of WNV neuroinvasive diseases in humans infected by WNV in Europe.

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Type 1 Equine Herpesvirus encephalomyelitis outbreak in a horse farm in Minas Gerais, Brazil

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Equine Herpesvirus (EHV) is an important pathogen that infects horses. Clinical signs may be due to respiratory or reproductive tracts infection. EHV belongs to the family Herpeviridae, sub family Herpevirinae and Varicellavírus genus. There are five types of EHV known as Equine Herpesvírus types 1, 2, 3, 4 and 5. All of them are capable of causing latent infections, that means, once infected, the horse will be infected during all its life, without any clinical signs. Reactivation of the virus may occur, mostly after a stressful events as well as transportation, pregnancy, dietary changes, etc. Before the appearance of clinical signs, latent infected animals are an important sources of contamination trough other horses in the farm. Foals may be infected during in uterus life, after birth, placenta and fetal membranes have a large amount of viral particle that may infect susceptible horses. When in the central nervous system the virus causes a encephalomyelitis by destroying endothelial cells and neurons. The aim of this paper was to report an EHV − 1 encephalomyelitis outbreak in a Mangalarga Marchador horse farm in Pedralva, Minas Gerais, Brazil. Abortion and respiratory disease were reported in the farm. In 2015 march, a 4-month foal was presented with clinical signs like hind limb paresis, urinary incontinence, feces retention. After two days of nurse care, the animal presented lateral decubitus. Another foal at the same age presented same sings one month after. Three mares, that was suspected of having the illness had their blood collected for PCR analysis. One of them reacted positive for EHV − 1. So far, four animals presented clinical signs of EHV - 1 and all of them were euthanized. It is clear that the virus had caused the disease in those animal and control measures should be taken to avoid new cases and deaths in the farm.

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Arboviral Infections (Eastern Equine Encephalitis, Western Equine Encephalitis, Venezuelan Equine Encephalitis and West Nile Encephalitis) in horses of Costa Rica

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Viruses of the genus Alphavirus and Flavivirus can cause febrile illness and in some cases, neurological disease in both humans and animals. West Nile Virus (WNV), Eastern Equine Encephalitis Virus (EEEV), Western Equine Encephalitis Virus (WEEV) and Venezuelan Equine Encephalitis (VEEV) are endemic in the Mesoamerican region and the local appearance of these viruses is regulated by the amount of vectors and reservoirs. The objective of this research was to establish the etiologic agents associated with the presentation of arboviral neurological disease in horses of Costa Rica during 2009-2014 and to establish the seroprevalence of these arbovirus in a representative sample of horses nationwide. 141 outbreaks of neurological disease in horses were studied and a total of 201 serum samples were analyzed by IgM capture ELISA resulting in the diagnosis of 4 cases of EEEV, 79 cases of VEEV and 11 cases of WNV. Besides the national seroepidemiological study of 246 sera by ELISA IgG reflects the following prevalences: 57% WNV, EEEV 62%, VEEV 43% and WEEV 17% reflecting the wide dissemination of these arboviruses in Costa Rica.

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Disseminated cryptococcosis in an Arab horse in the UAE

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An adult Arab gelding was diagnosed with disseminated cryptococcosis, including pneumonia and CNS signs. After 2 months of