

unapparent (asymptomatic) infection. The virus of EIA is transmitted by blood or contaminated blood derivatives, but in the nature the main way of transmission is by bloodsucking insects. Diagnosis is based on serological testing, being the agar gel immunodiffusion test (AGID) the test prescribed by OIE for international trade of horses. The purpose of this study was to evaluate EIA presentation in northern-west provinces of Argentina, based on results of AGID from serum samples. The results were compiled from a laboratory which belongs to a net of laboratories regulated by the sanitary authorities (SENASA) and is located in Corrientes city. Datum obtained correspond to 56,391 samples obtained from equines of Corrientes (n=48,661), Misiones (n=6,722) and Chaco (n=1,008) provinces, analyzed between 2005 and 2014. A total of 1,954 animals were positives in this period. Percentage of positivity (PP) was determinate, discriminated by province and year. The average PP was determinate by province for the period between 2005 and 2012. In all cases, tendencies shows the decrement of PP from 2005 to 2012 (Misiones, Chaco) or 2014 (Corrientes). In Corrientes province, the rank of PP was 6,03% (2005) to 1,24% (2013); in Misiones was from 4,25% (2005) to 0,8% (2010) and in Chaco was from 20,05% (2008) to 0% (2005 and 2006). The average PP for the period between 2005 and 2012 was 3,77%, 3,35% and 5,91% in Corrientes, Misiones and Chaco, respectively. Since that analysis was made from a non-randomly sampling from serum that arrives to diagnosis in laboratory, this findings cannot be expressed in terms of prevalence. For the same reasons, the PP reached is lower than those reported for equines of the same areas in prevalence studies, because the animals that are frequently controlled are those destined to sports and shows activities and their situation does not reflect what occurs in equines destined to do farm tasks, which are often excluded from controls and where the disease prevalence is higher. This analysis shows, however, a tendency which is in agreement with reported by other authors for the provinces studied, with a higher prevalence in Chaco when compared with Corrientes and Misiones provinces.

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### Equine Infectious Anemia: seroprevalence in the Northeastern region of Argentina

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Equine Infectious Anemia (EIA) also known as “swamp fever” is a life threatening disease which affects members of the Equidae family and has worldwide distribution. Definitive diagnosis is made with serologic testing; the agar gel immunodiffusion test (AGID) is the prescribed test by OIE. The goal of the present work was to determinate the prevalence of EIA infection among work horses in three cattle farms situated in the Northwest of Corrientes. A sample of whole blood was obtained from all the horses (n=212), and the AGID test was carried out. One hundred and nineteen horses were found infected (AGID positive). Regarding the prevalence of infection in each farm, it was 69% (82 out of 119) in San Luis del Palmar, 44% (34 out of 78) in Empedrado and 0% (no AGID positive animals were found among a total of 15 horses) in Santa Lucia farm. The range of infection was from 0 to 69%. The region environment has the same characteristic in the three premises, high humidity, warm temperatures through the year and high density of arthropods, members of Tabanidae family,

well known as mechanical vectors for the EIA virus. It is a remarkable fact that in an endemic region herds can coexist, ones being infected with high prevalence and others being EIA free. This sanitary status, however, is more frequent in sports animals because they are more controlled in order to complement sanitary regulations. It is important, in endemic areas, to carry out studies that evaluate infections dynamics.

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### Serologically silent, occult equine infectious anemia virus (EIAV) infections in horses

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Samples from 59 clinically normal horses stabled at five separate farms in the Santa Fe Province of Argentina were analyzed to compare molecular and serological based techniques for the diagnosis of Equine Infectious Anemia Virus (EIAV). Of these 26 (44.1%) were positive in official AGID tests and/or gp45/gp90-based ELISA. Surprisingly, 18 of the 33 seronegative horses produced positive results in a PCR directed against viral sequences encoding gp45 (PCR+ve/AGID-ve) and only one of these seroconverted during a subsequent two year observation period. The fact that nucleic acid sequences were amplifiable in 7 of the 18 animals with EIAV gag gene specific primers recommended by the OIE and 2 of these 7 horses, produced positive reactions with oligonucleotide primers directed predominantly against the 5' untranslated region of the viral genome suggest these results were not an artifact produced by the original PCR-based test. Furthermore sufficient quantities of serum were available from 8 of these horses to confirm their negative serological status in sensitive Western Blot tests using purified EIAV particles as antigen. Studies involving 7 of the PCR+ve/AGID-ve horses to measure lymphocyte proliferation in the presence of PHA showed no significant differences between this group and control animals. In addition, lymphocytes from 2 of these 7 horses responded to peptides derived from gp90 and gp45. Together these results demonstrate that apparently clinically normal horses with no gross signs of immunodeficiency in terms of T<sub>helper</sub>-cell function can remain seronegative for at least 24 months while harboring EIAV specific nucleic acid sequences.

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