

VV113 - PRIMARY AND SECONDARY MUCOSAL IMMUNITY AFTER CHALLENGE WITH BRAZILIAN AVIAN INFECTIOUS BRONCHITIS VARIANT

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Avian infectious bronchitis virus (IBV) is one of the most important poultry industry pathogens. IBV is a gammacoronavirus, characterized for high genomic mutations, with frequent emergence of new variants and incomplete vaccine protection. The aim of this study was to evaluate humoral and cell-mediated immune responses in birds vaccinated with the H120 attenuated strain and challenged with Brazilian IBV field isolates genotyped as IBV variants. Twenty seven SPF chickens were equally distributed in three groups placed in positive pressure isolators. At one-day old group A birds received full-dose H120 vaccine. At 28 days of age, all birds from vaccinated group A and from not vaccinated group B were challenged with 104.0 EID₅₀/bird of F3735 Brazilian field strain of IBV. Group C was mock infected. All birds were euthanized at 5dpi, tracheas were removed and evaluated for ciliary activity, microscopic lesions and viral load to determine degree of vaccine protection, and for RT-qPCR quantification of immune response genes (innate:TLR3, TLR7, MyD88, IFN α ; inflammatory: IL6; cell-mediated: CD8 β , CD3 ϵ , CD4, IFN γ and Granzyme homolog A). Tears and serum were analyzed for anti-IBV IgG by ELISA. Scores of lesions observed by ciliary activity and histopathology, and levels of viral load, were significantly reduced on vaccinated group A compared to group B. All immune related genes tested were significantly up-regulated for the primary immune response in group B. Although lower levels of mRNA for TLR7, MyD88, IFN α , IFN γ , IL6, CD8 β , Granzyme homolog A and CD3 were found on tracheal samples of birds from group A (secondary response) compared to group B, the differences were not significant, what in part may be due to the presence of two birds that resulted as unprotected in the vaccinated

group A. Transcripts for CD4 were significantly lower on vaccinated group A compared to group B. Levels of local and systemic IgG were significantly higher in group A compared to unvaccinated/challenged group B. These results indicate an exacerbated local cell-mediated primary immune response to the IBV field variant strain, and a lower level secondary response to vaccination and variant IBV challenge for the evaluated interval post-infection. Otherwise, both local and systemic humoral responses were boosted during secondary response. FINANCIAL SUPPORT: PROJETO EMBRAPA 03.12.03.012.0.00

VV172 - ASTROVIRUS DETECTION IN THE BAT TADARIDA BRASILIENSIS (GEOFFROY, 1824: CHIROPTERA, MOLOSSIDAE) FROM RIO GRANDE DO SUL STATE, BRASIL

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Bats are the second largest group of mammals on the planet, with about 1,200 species and 174 are found in Brazil. Due to changes and fragmentation of natural habitats, these animals seek shelter alternatives and thus become increasingly exposed to anthropic environments. Some bat species are recognized as natural reservoirs of several viral families and this feature gives them an important role in the transmission and maintenance of these microorganisms. This work aims to detect the presence of astrovirus genome fragments in bat organ samples from Rio Grande do Sul State, Brazil. The bats were caught with mist nets at roost or foraging sites in natural environments and entomological network, gloves and long tweezers were used for the urban areas. The animals were euthanized and sent to the Instituto de Pesquisas Veterinárias Desidério Finamor/FEPAGRO for rabies diagnosis. Negative rabies samples were further