

USO DE ANTICORPO POLICLONAL ESPECÍFICO PARA NUCLEOPROTEÍNA RECOMBINANTE DO VÍRUS A BRONQUITE INFECCIOSA (VBI) NA TÉCNICA DE IMUNO-HISTOQUÍMICA (IHC) PARA DETECÇÃO DE DIFERENTES ESTIRPES DO VBI

(USE OF SPECIFIC POLYCLONAL ANTIBODY TO RECOMBINANT NUCLEOPROTEIN OF INFECTIOUS BRONCHITIS VIRUS IN THE IMMUNOHISTOCHEMISTRY (IHC) FOR THE DETECTION OF DIFFERENT IBV STRAINS)

**F. S. FERNANDO¹, M. M. BORZI¹, A. M. GIBERTONI¹,
M. B. BANDARRA¹, M.F.S. MONTASSIER¹, H. J. MONTASSIER^{2*}**

IBV infection has been a major threat to poultry industry worldwide and can be involved in respiratory disease, nephritis and egg production disorders. The conventional diagnosis of the IBV is based on virus isolation in embryonated eggs, followed by molecular or immunological identification of isolates, making these procedures tedious and time consuming. Thus, we proposed the development of IHC method to detect IBV antigen in tissue samples using a goat hyperimmune serum against recombinant nucleoprotein (RN) for detection of three different viral strains of IBV. One goat was immunized with N recombinant protein expressed in *Escherichia coli*, and after five immunizations, the goat anti-IBV serum was obtained and analyzed by ELISA for titrating anti-IBV specific antibodies and Western blot to use as a primary antibody, along with the secondary complex containing a polymer linked to peroxidase in the IHC technique to detect IBV antigens in tissue samples. Tracheal and renal tissue samples were collected from three groups of SPF chickens housed in positive pressure isolators; experimentally infected with a Massachusetts, IBVPR-05 or IBVPR-12 strains, respectively, and from another that remained non-infected (control group). The presence of IBV antigen was detected in the cytoplasm of epithelial cells from tracheal samples in all challenged groups, while kidney tubule cells were positively labeled by IHC technique in all samples from groups challenged with IBVPR-05 and IBVPR-12 strains, but not in kidney samples from birds challenged with Massachusetts strain. No IBV antigens were detected by IHC in tissue samples from the control group. In conclusion, the IHC technique with goat polyclonal antibody against RN protein of IBV, was able to detect specifically IBV antigens in tissue samples of chickens infected with a variant strain and could be an advantageous alternative for the direct diagnose of IBV infection, or even to the virus isolation method.

¹Programa de pós-graduação, Faculdade de Ciências Agrárias e Veterinárias - UNESP Jaboticabal, SP, Brasil.

^{2*}Departamento de Patologia Veterinária, Faculdade de Ciências Agrárias e Veterinárias -UNESP- Jaboticabal. E-mail: heliojm@fcav.unesp.br