AVIAN INFECTIOUS LARYNGOTRACHEITIS: LABORATORIAL DIAGNOSTIC, VIRAL CHARACTERIZATION AND CONTROL MEASURES IN AN OUTBREAK IN COMMERCIAL LAYING HENS FROM STATE OF SAO PAULO, BRAZIL

(LARINGOTRAQUEÍTE INFECCIOSA DAS AVES: DIAGNÓSTICO LABORATORIAL, CARACTERIZAÇÃO VIRAL E MEDIDAS DE CONTROLE EM UM SURTO EM AVES DE POSTURA COMERCIAL NO ESTADO DE SÃO PAULO, BRASIL)

R. L. LUCIANO[1*], M. R. BUIM[2], C. DEL FAVA[3], R. HARAKAVA[4], M. M. ISHIZUKA[5], F.G. BUCHALA[6]

Avian infectious laryngotraqueitis (ILT) is a respiratory pathogen caused by *Herpesviridae*, *Gallid hespesvirus 1*. The disease is responsible for economic losses in poultry production. The objectives of this report were to compare the performance of diagnostic techniques, carrying out molecular characterization of ILT virus and describe the epidemiological diagnosis and prophylactic measures applied in an ILT outbreak that has been occurring in Guatapará, state of Sao Paulo, Brazil. From December 2010 to November 2011, eighty-three pooled samples coming from flocks of commercial laying hens were analyzed using ELISA and PCR. Of these, forty-five samples were submitted to histopathological examination. Official control measures were conducted in two steps: preliminary phase (epidemiological diagnosis by applying a specific questionnaire to guide the planning of unspecific prophylactic measures of biosecurity) and execution phase, with design of legal instruments to delimitate the infected zone (sanitary education of all farmers and biosecurity procedures, passive surveillance, official supervision of all activities and authorization for TCO vaccine). Thirty-two samples were positive in PCR (38.55%), using ICP4 gene (688 pb). Besides, DNA of the 12 field samples was sequenced, showing profiles different from two commercial vaccine strains (CEO and TCO). Seropositive birds were detected by ELISA in 98.79% of the samples. Histopathology showed lymphoplasmacytic inflammatory infiltrates, associated with the presence of syncytial cells with or without intranuclear eosinophilic inclusions in 31.1% of the samples. These results infer that ELISA was highly sensitive in ILT antibody detection, while PCR and histopathology were particulars in the ILT virus identification and in identifying lesions characteristics of ILT, respectively. The official program is important to obtain farmers collaboration in taking biosecurity measures that can prevent the occurrence of new cases of ILT. Furthermore, laboratory procedures are important to support the adoption of control measures by the Official Program of Poultry Health.

[1*]Mestre - Centro Avançado de Pesquisa Tecnológica do Agronegócio Avícola - Instituto Biológico. E-mail: rluciano@biologico.sp.gov.br
[2] Doutor - Unidade de Pesquisa e Desenvolvimento de Bastos - Instituto Biológico
[3] Doutor - Centro de Pesquisa e Desenvolvimento de Sanidade Animal - Instituto Biológico
[4] Doutor - Centro de Pesquisa e Desenvolvimento de Sanidade Vegetal - Instituto Biológico
[5] Doutor - Faculdade de Medicina Veterinária - USP
[6] Pós-doutor – Coordenadoria de Defesa Agropecuária do Estado de São Paulo

[1*]Mestre - Centro Avançado de Pesquisa Tecnológica do Agronegócio Avícola - Instituto Biológico. E-mail: rluciano@biologico.sp.gov.br
[2] Doutor - Unidade de Pesquisa e Desenvolvimento de Bastos - Instituto Biológico
[3] Doutor - Centro de Pesquisa e Desenvolvimento de Sanidade Animal - Instituto Biológico
[4] Doutor - Centro de Pesquisa e Desenvolvimento de Sanidade Vegetal - Instituto Biológico
[5] Doutor - Faculdade de Medicina Veterinária - USP
[6] Pós-doutor – Coordenadoria de Defesa Agropecuária do Estado de São Paulo