1st International Avian Respiratory Disease Conference

coronaviruses
avian paramyxoviruses & laryngotracheitis virus

May 15-18, 2011
Identification and genomic sequence analysis of an Avian Paramyxovirus serotype 4 (APMV-4) isolated from Egyptian geese (Alopochen aegyptius) in South Africa

Abolnik, C. 1,2, van Wilpe, E. 2, Molefe, M. 1, Olivier, A.J. 3, Dreyer, M. 4

1ARC-Onderstepoort Veterinary Institute, Private Bag X05, Onderstepoort, Pretoria, 0110, South Africa; 2Faculty of Veterinary Science, University of Pretoria, Private Bag X04 Onderstepoort 0110, South Africa; 3Klein Karoo International Laboratory – PO Box 241, Oudtshoorn, 6620, South Africa; 4Western Cape Department of Agriculture, Private Bag X01, Elsenburg, 7607, South Africa.

Ten serotypes of Avian Paramyxoviruses (APMV 1-10) have been described to date. Some of these, for example Newcastle disease (APMV-1) cause serious disease in poultry. APMV -2, -3, -6 and -7 have been associated with milder disease in poultry and APMV-5 is known to cause disease in wild birds, but APMV -4, -8, -9 and -10, isolated from healthy wild birds, have not been associated with disease in poultry thus far. A paramyxovirus isolated from wild Egyptian geese in South Africa was identified as APMV-4 by RT-PCR and sequence analysis. This is the first report of APMV-4 in Africa and we present results of genomic sequence analysis.

Characterization of a Newcastle Disease Virus isolate from chicken in Mexico

Absalón A. E. 1, Lucio-Decanini E. 2, Mariano-Matías A. 1, Vásquez-Márquez A. 1, Salazar-Robles G. 1, García-Barrera L.J. 1, Ortega R. J. 2, Morales-Garzón J.A. 3, and Cortés-Espinosa D.V. 4

1 Centro de Investigación en Biotecnología Aplicada del Instituto Politécnico Nacional. Carretera Estatal Santa Inés Tecuecomac-Tepetitla km 1.5, C.P. 90700. Tepetitla, Tlaxcala. México. Contact. aabsalon@ipn.mx; Phone: +52 (55) 5729 6000 ext. 87813 Fax: +52 (248) 487 0762

The Newcastle Disease Virus (NDV) belong to the genus Avulavirus in the family Paramyxoviridae. It is a highly infectious virus that affects birds, and causing great economic loss in the poultry industry. In Mexico, the disease is present in several regions, with a high incidence of velogenic strains. We report here the genome of a strain of NDV isolated in 2005 (APMV1/chicken/Mexico/P05/2005). The virus isolated was characterized by embryonic average mortality (36 h) and intracerebral pathogenicity index (ICPI) (1.99) and was identified as a velogenic virus. This was confirmed by analyzing the cleavage site of the F protein, which reveals a high content of basic amino acids. The RNA genome has a size of 15.192 nt, and phylogenetic analysis places it as a virus belonging to genotype V. This virus is related to other NDV isolated in Mexico and other countries in America.