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**TÍTULO: A NOVEL AVIPOXVIRUS ASSOCIATED TO CUTANEOUS AND DIFTERIC DISEASE IN MAGELLANIC PENGUINS (SPHENISCUS MAGELLANICUS) IN BRAZIL.**

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**RESUMO:**

A novel avipox virus caused diphtheric disease in two and cutaneous lesions in ten Magellanic penguins (*Spheniscus magellanicus*) housed in outdoor enclosures in a Rehabilitation Centre in Santa Catarina (27°35' 49" South, 48° 32' 58" West), Brazil. Diagnosis was based on clinical signs, histopathology and polymerase chain reaction (PCR). Clinical signs in the penguins included cutaneous papules and nodules around eyelids and beaks, depression and restriction on weight gain. The most common gross lesions were severe congested and hemorrhagic lungs, splenomegaly and cardiomegaly. Histological examination revealed Bollinger inclusion bodies in cutaneous lesions, mild to severe pneumonia, moderated periportal lymphocytic hepatitis, splenic lymphopenia and lymphocytolysis. Other frequent findings included necrotizing splenitis, enteritis, esophagitis, dermatitis and airsacculitis. Cytoplasmic inclusion bodies were also seen within ophagical epithelial cells in two animals. DNA from all samples was amplified from skin tissue by PCR using P4b-targeting primers already described in the literature for avipox virus. The sequences showed a different virus strain belonging to the genus Avipoxvirus of the Chordopoxvirinae subfamily, being totally divergent from Penguin poxvirus and Avipox virus already described in Magellanic penguins in Patagonia, segregating with in a clade of canarypox-likeviruses implicated on diphtheric and respiratory disease. This novel avipox virus seems to be a threat to the Magellanic penguins for its lesions on gastro intestinal and respiratory tissues. As a similar virus was never described in the wild, the birds were not released. We are grateful to the Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq) and São Paulo Research Foundation (FAPESP 2010/51801-5), IBAMA and Santa Catarina's Environmental Military Police.