

2012-2017 年禽類副黏液病毒分離株核酸序列分析

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摘要

過往台灣對於禽類副黏液病毒 (APMV) 之研究僅著重於第一血清型新城病，為了瞭解各個型別 (APMV-1 ~ -13) 副黏液病毒在國內家禽飼養場、野鳥、輸入及走私禽鳥、觀賞鳥等族群之帶毒情形，本研究以核酸序列檢測與分析進行之。於 2012-2017 年共鑑定了 56 株 APMV，其中 43 株 APMV-1、5 株 APMV-4、3 株 APMV-6、3 株 APMV-7、1 株類 APMV-9 及 1 株類 APMV-12。另進行 APMV-1 融合蛋白基因親緣樹分析，43 株 APMV-1 分屬 Class I 以及 Class II 的第 I、II、VI 及 VII 等基因型。本研究發現除了第一血清型的新城病之外，至少有另外五種血清型的副黏液病毒存在於台灣的禽鳥間，結果可供副黏液病毒對於禽鳥潛在性影響之流行病學研究用。

Genetic Analysis of Avian Paramyxoviruses Isolated from Wild Birds and Domestic Poultry from 2012 to 2017

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Abstract

Avian paramyxovirus (APMV) serotype 1 (Newcastle disease, ND) is the most commonly detected serotype in Taiwan. Nevertheless, information regarding the distribution of all APMVs serotypes 1-13 in domestic poultry, wild birds, imported birds and pet birds is limited. This study used molecular analytical techniques to determine the serotype and distribution of APMVs in birds from 2012 to 2017. Fifty-six APMV isolates were characterized, including 43 APMV-1, 5 APMV-4, 3 APMV-6, 3 APMV-7, 1 APMV-9-like, and 1 APMV-12-like. The results of the phylogenetic analysis of fusion protein genes demonstrated that 43 APMV-1 strains belonged to the lineage of class I, and the lineage of genotype I, II, VI, VII of class II, respectively. The present study suggests that in addition to ND, there are at least five more serotypes of APMVs circulating among poultry and wild birds in Taiwan and these results will serve as a valuable resource for any future relevant epidemiological investigations.