

田間分離豬生殖與呼吸綜合症病毒毒力性之研究

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摘要

豬生殖與呼吸綜合症是造成世界養豬產業重大經濟危害之疾病之一，亦是嚴重危害我國養豬產業的因素之一。本病是由具封套之正股單鏈 RNA 病毒所引起的，該病毒目前分類於巢目病毒目、動脈病毒科中。PRRS 病毒基因極易重組與變異，因此，目前流行於世界上之 PRRS 病毒其基因序列可分為歐洲型及北美型兩類。根據基因分析的結果顯示，目前台灣 PRRS 分離株皆屬於北美型。為了研究這些分離株其毒力之差異，我們分別選擇包含北美型之標準株 VR-2332PRRS、台灣原始分離株 WSV 以及 SH2、1214、3267 等三株田間分離株進行豬隻攻毒試驗以評估其毒力性。結果顯示，除了病理學變化外，其他包含如誘發抗體差異性、體重增重率及病毒繁殖率並無明顯差異。雖然如此，藉由豬隻攻毒其病理學之變化差異性仍是評估 PRRS 病毒毒力可用模式之一。

Pathogenesis of PRRSV strains isolated in Taiwan

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Abstract

Porcine Reproductive and Respiratory Syndrome (PRRS) is among the diseases causing major economic impact in modern pig production worldwide. It is likewise a severe problem among pig farms of Taiwan. The virus causing PRRS is a small enveloped single-stranded RNA virus with, belonging to the family Arteriviridae, within the order Nidovirales. The PRRS viral genome exhibits high rates of mutation and recombination and two dominant genotypes, the North American (NA) and European (EU) types, exist in the world. Genomic analyses have revealed that all of the isolated strains from Taiwan belong to the NA genotype lineage. In order to understand the pathogenicity of these Taiwanese strains, we compared the differences in virulence among animals challenged with the NA reference strain VR-2332, and four strains isolated from Taiwan: WSV, SH2, 1214 and 3267. Although there was a significant difference in pathological symptoms (gross lesions), no differences in antibody titer, weight gain and viral load were observed in infected pigs. Nevertheless, the animal challenge test is still a useful model to assess the virulence of different isolated strains of PRRS virus.