# 離乳豬之非典型瘟疫病毒檢測

新興傳染病組

蔡國榮 副研究員

## 摘要

2015 年美國堪薩斯州立大學在執行豬隻例行性監測計劃時，以次世代定序發現新的瘟疫病毒，病毒核酸序列不同於豬瘟、牛病毒性下痢、羊邊境病毒等典型瘟疫病毒，此病毒被命名為豬隻非典型瘟疫病毒，隨後艾荷華州立大學團隊在一項人工接種試驗，成功誘導懷孕母豬產下震顫的仔豬，證實此病毒與仔豬先天性震顫的關聯。監測研究顯示歐洲、美國與亞洲等國的飼養豬隻皆有豬隻非典型瘟疫病毒。本研究採用即時反轉錄聚合酶鏈反應檢測離乳豬隻血清樣本，經核酸定序確認含有豬隻非典型瘟疫病毒核酸，將己測得病毒序列進一步與基因庫中國外發表序列做比對與演化分析。

# The detection of atypical porcine pestivirus in weaned pigs

Kuo-Jung Tsai

## Abstract

Atypical porcine pestivirus (APPV) was identified during a routine surveillance program, which was conducted by Kansas State University via next generation sequencing, in the United States in the year of 2015. APPV was genetically different from known pestiviruses including classical swine fever virus, bovine viral diarrhea virus, border disease virus, etc. APPV has been proved to be related to congenital tremor, based on an inoculation experiment conducted at Iowa State University, which successfully induced pregnant sows to deliver piglets with congenital tremors. The existence of APPV was approved in the majority of pig industries in North America, European and Asian countries with the evidence of viral RNA or antibodies, based on surveillance studies. In this study, a collection of serum samples of weaned pigs in Taiwan was screened for the presence of APPV genomes by real-time reverse transcriptase polymerase chain reaction (rRT-PCR) and confirmed by sequence determination. The detected viral sequences were used to conduct phylogenetic analysis along with those of other countries.