**狂犬病診斷實驗室病毒分離工作報告及**

**赴香港參加「區域性跨國界動物傳染病訓練班」心得報告**

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**摘要**

 狂犬病是最古老的人畜共通傳染病之一，幾乎所有溫血動物都可被感染。自2013年7月發現鼬獾狂犬病迄今，本所已於全臺9縣市77鄉鎮確診500餘例動物狂犬病病例，陽性動物以鼬獾比例最高，占98.6% (574/ 582)。另依分子流行病學研究顯示，我國之鼬獾狂犬病病毒株已形成東部與西部二獨立演化分支。為建立狂犬病病毒分離技術，本所透過與美國疾病管制局技術合作，成功利用小鼠神經母細胞瘤細胞(MNA)分離鼬獾狂犬病野外病毒。將狂犬病陽性病例腦乳劑接種至MNA細胞，於初代培養即可見零星病毒螢光灶，連續繼代4-9代後可見100%細胞被感染，病毒力價最高約104.5 FFD50/ 0.1 ml。未來擬持續進行重要病例之病毒分離，保存臺灣鼬獾狂犬病毒種毒供後續研究與應用。

 「區域性跨國界動物傳染病訓練班」係由梅島動物疾病中心主辦，香港城市大學協辦，於2016年9月25日至10月1日假香港喜來登酒店舉行。此次訓練課程包含高病原性家禽流行性感冒、新城病、豬瘟、非洲豬瘟、綿羊痘、小反芻獸疫、口蹄疫、豬水疱病、牛接觸傳染性胸膜性肺炎、典型出血性敗血症、非洲馬疫、馬媾疫及馬鼻疽等13種重要跨國界動物傳染病介紹。共有25位來自柬埔寨、印度、印尼、日本、韓國、寮國、馬來西亞、蒙古、巴基斯坦、菲律賓、新加坡、泰國、越南及臺灣等14個亞洲國家的國際學員參加。藉由本次研習，使我瞭解OIE表列之多種跨國界動物傳染病，並透過與其他國家學員之經驗交流，增加動物疾病診斷及防疫實務經驗。

 **Rabies virus isolation using cell culture techniques and a report on the Regional Transboundary Animal Disease Workshop in Hong Kong**

Wei-Cheng Hsu

**Abstract**

 Rabies is one of the oldest zoonotic diseases, and almost all warm-blooded animals are susceptible to it. Since the discovery of rabies in ferrets in Taiwan in July 2013, more than 500 infected animals have been identified in 77 townships comprising 9 counties, and most infected animals were ferret badgers (98.6%). Previous molecular epidemiological studies conducted by this group have indicated that rabies viruses in Taiwan have been independently evolving into western and eastern lineages. We adopted techniques from the Centers for Disease Control and Prevention, in the United States, and successfully isolated rabies virus with mouse neuroblastoma cells. By inoculating the cells with brain homogenate of natively infected ferret badgers, rabies viral antigens were detected in the inoculated cells, and most cells became infected after four to nine passages. The highest virus titer reached 104.5 FFD50 / 0.1 ml. Isolation of rabies virus from clinical specimens as well as from field samples will continue on for further comparative studies and diagnostic applications.

"The Regional Transboundary Animal Disease Workshop" was held by the Plum Island Animal Disease Center and the City University of Hong Kong, at the Sheraton Hong Kong Hotel in Kowloon from September 25th to October 1st, 2016. This program was focused on 13 important diseases: highly pathogenic avian influenza, Newcastle disease, classical swine fever, African swine fever, sheep pox, peste des petits ruminant, foot-and-mouth disease, swine vesicular disease, contagious bovine pleuropneumonia, hemorrhagic septicemia, African horse sickness, dourine, and glanders. Twenty-five trainees from 14 Asian countries attended this workshop. Through this course, the trainees deepened their understanding of these OIE listed diseases, and their abilities of disease diagnosis and prevention were enhanced by sharing their experiences with each other.