

# 鼬獾狂犬病病原性分析與口服疫苗效力評估結果

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## 摘要

台灣自 102 年發現鼬獾狂犬病起，截至目前為止 98%陽性病例發生於鼬獾，經分子演化分析與計算推論該病毒已經存在台灣逾幾十年，為釐清鼬獾狂犬病病毒在不同物種間的感受性，本實驗室是以進行該病毒於鼬獾、小鼠、白鼻心之病原性試驗；結果顯示鼬獾狂犬病病毒依舊以在目標宿主鼬獾之感受性最高。為了未來進行撲滅計畫，本所被委以評估 WHO 推薦之狂犬病口服疫苗，本試驗是以在鼬獾評估口服疫苗之安全性、效力、免疫原性，結果顯示該疫苗在鼬獾之安全性佳、無唾液排毒疑慮，並且可達歐盟或美國規範之野生動物活毒疫苗保護標準，相關成果已投稿 PLOS ONE 並被接受。

# **Pathogenesis Analysis of Ferret Badger Rabies and Evaluation of Oral Rabies Vaccine**

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## **Abstract**

Since 2013, ferret badger rabies has been discovered in Taiwan with 98% positive rate recorded in ferret badgers. From molecular evolution analysis and calculating inference, the virus has existed in Taiwan for more than 10 years. To clarify the susceptibility of the ferret badger rabies virus among different animal species, the pathogenicity tests were conducted and compared in ferret badgers, mice and gem-faced civets. The result showed that the ferret badger rabies virus still causes the highest disease susceptibility to the target host, ferret badgers. In addition, to carry out rabies elimination plan in the future, Animal Health Research Institute(AHRI) was commissioned to evaluate rabies oral vaccines recommended by WHO. The oral vaccines assessment included the safety, efficacy and immunogenicity tests on ferret badgers. The result revealed that the selected oral vaccine was safe for ferret badgers, and there was no risk of virus excretion in ferret badgers' saliva. Also, the oral vaccine could reach the protection standard for wild animal live vaccine against rabies required by EU or the United States regulation. The study findings have been submitted to PLOS ONE and accepted for publication.