

# 牛流行熱不活化疫苗量產技術簡介(工作報告)

製劑組

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## 摘要

牛流行熱是由桿狀病毒經吸血昆蟲媒介傳染的發熱性疾病，在台灣已成為常在性疾病，除使牛隻產生高熱、呼吸症狀、關節疼痛等臨床症狀之外，泌乳量遽減常造成重大經濟損失。為改善本所牛流行熱不活化疫苗以水質磷酸鋁膠作為佐劑，抗體高峰期不夠長的缺點，於104年起著手研發含新佐劑之牛流行熱疫苗，並於108年7月完成變更疫苗許可證使用之賦形劑，目前生產之牛流行熱疫苗已全面更改為新佐劑（水包油雙相佐劑），提供農民高免疫效益之疫苗，有效防治台灣牛流行熱疫病發生。

因本所疫苗製造業務調整，牛流行熱不活化疫苗於109年停止生產，直至112年再次恢復生產並預計生產5萬劑量，本次工作報告即針對該疫苗生產目前製造進度進行報告。

# **The Introduction of Bovine Ephemeral Fever Inactivated**

## **Vaccine Process**

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### **Abstract**

Bovine ephemeral fever (BEF), caused by bovine ephemeral fever virus belonging to the *Rhabdoviridae*, is an arthropod-borne disease. BEF has turned into an endemic in Taiwan, which means that this disease infection could be persistently seen in the field. Besides the clinical signs, such as high fever, respiratory syndrome and joint pain, this febrile disease often causes serious economic damage to the dairy industry, due to reducing milk production. Although the conventional aluminum phosphate (Al-gel) vaccine is safe, the lasting period of high serum neutralizing (SN) antibody titer is not long enough to provide effective protection for the cattle herd. To improve this, the development of the BEF vaccine containing a new adjuvant had begun in 2015. The alteration of adjuvant in the animal pharmaceuticals license of BEF vaccine had been approved in 2019. This development could provide a high efficacy vaccine to the farmer and better protection against BEF to the herd in Taiwan.

This work report is to report the current manufacturing progress of BEF inactivated vaccine and the difficulties we are facing.