

# 鵝出血性腎炎腸炎疫苗研發概況

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## 摘要

鵝出血性腎炎腸炎是由鵝出血性多瘤病毒所引起，本病主要發生於 4-10 週齡小鵝，其死亡率 4%-67%，年齡越小死亡率越高。鵝隻臨床上有共濟失調及頭頸震顫等神經症狀，排出血樣糞便，病理變化可見腎臟發炎及出血性腸炎。鵝出血性腎炎腸炎為歐洲養鵝國家鵝隻主要疾病之一，雖然非屬世界動物衛生組織表列應通報疾病，但在我國列為動物輸入需檢疫項目。本病臨床上不易與水禽小病毒感染症等作類症鑑別，病毒感染後除了小鵝會有死亡外，在復原的鵝隻持續排毒亦是難以防治的原因。國內外目前皆無商品化的疫苗，因而只能用飼養管理來防治本病。使用細胞培養方式增殖鵝出血性多瘤病毒，以此進行疫苗開發，已完成不活化疫苗安全試驗以及效力試驗，雛鵝在免疫後抗體可達 SN 200 倍以上。

# **Development of a goose hemorrhagic polyomavirus vaccine**

Yu-Hua Shih

## **Abstract**

Goose hemorrhagic nephritis is caused by the goose hemorrhagic polyomavirus and the disease mainly occurs in goslings aged 4- 10 weeks, with a mortality rate of 4-67% and younger goslings having a higher mortality rate. Infected geese typically exhibit a variety of neurological symptoms such as ataxia, head and neck tremors as well as hematochezia. The pathological conditions are kidney inflammation and hemorrhagic enteritis. Goose hemorrhagic nephritis is one of the major diseases affecting European goose populations. Although it is not listed as a notifiable disease by the World Organization for Animal Health, it is listed as a disease that requires animal quarantine in Taiwan. Clinically, the disease is not easy to distinguish from parvovirus infections in waterfowl. One of the reasons making this disease difficult to control is that the diseased geese continue shedding the virus. Currently, there are no commercial vaccines available, so effective management of the disease can only be implemented with operational controls and feeding management. We developed a goose hemorrhagic nephritis vaccine by propagating goose hemorrhagic polyomaviruses via cell culture. Vaccine safety and efficacy tests were undertaken and for goslings, the antibody titer after immunization can reach SN 1:200, as tested by virus neutralization assays.