

# 白線斑蚊飼養與細胞培養技術之建立

疫學研究組

李璿

節肢動物媒介病毒顧名思義即是藉由節肢動物傳播的病毒。這類病毒中，與動物衛生相關者分屬於不同病毒科，如藍舌病病毒屬於里奧病毒科，牛流行熱病毒屬於桿狀病毒科，赤羽病毒屬於崩芽病毒科。國內對於這些疾病的相關研究，主要著重於病毒本身以及其哺乳類宿主，對於節肢動物病媒的著力不多，主要原因可能在於研究門檻較高以及缺少跨領域的合作。為了彌補這樣的缺口，自 2014 年起嘗試以庫蠓及蚊為對象，建立採集與飼養這些病媒昆蟲的技術。飼養昆蟲的昆蟲室是利用檢定雞舍內的一間雞舍翻修而成，飼養的白線斑蚊來自所內採集的子子，目前已經可以繁殖繼代，但飼血技術仍有改進空間。雖然這些工作因為職務的調動而中止，但相信這樣的嘗試，可為牛流行熱病毒這類蟲媒病毒未來的研究建立若干基礎。

## **Supporting arbovirus studies with *Aedes albopictus* rearing and a cell culture system: An aborted approach**

Fan Lee

### **Abstract**

Arthropod-borne virus, or arbovirus, is a category of viruses which are transmitted by arthropods. Arboviruses are found in a variety of families such as within the *Reoviridae* (bluetongue virus), the *Rhabdoviridae* (bovine ephemeral fever), and the *Bunyaviridae* (Akabane virus), and are of importance to animal health. Studies on animal diseases conducted in Taiwan have primarily focused on the viruses and their susceptible mammalian hosts. Limited resources is spent on investigating the arthropod hosts which carry the viruses, probably due to the difficulties in applying methods learnt in mammalian system to insect system. Therefore, since 2014, we attempted to collect and rear potential arthropod vectors of veterinary importance, targeting *Culicoides* biting midges as well as mosquitoes. An insectary was set up by remodeling a room within an existed poultry house. A colony of Asian tiger mosquito (*Aedes albopictus*) was the established in the insectary and the larvae collection commenced in the campus of our institute. Asian tiger mosquito can now be reared and can reproduce successfully, although methods of blood-feeding still need to be improved. It is believed that this attempt can benefit further studies on arboviruses of veterinary importance, particularly bovine ephemeral fever virus.