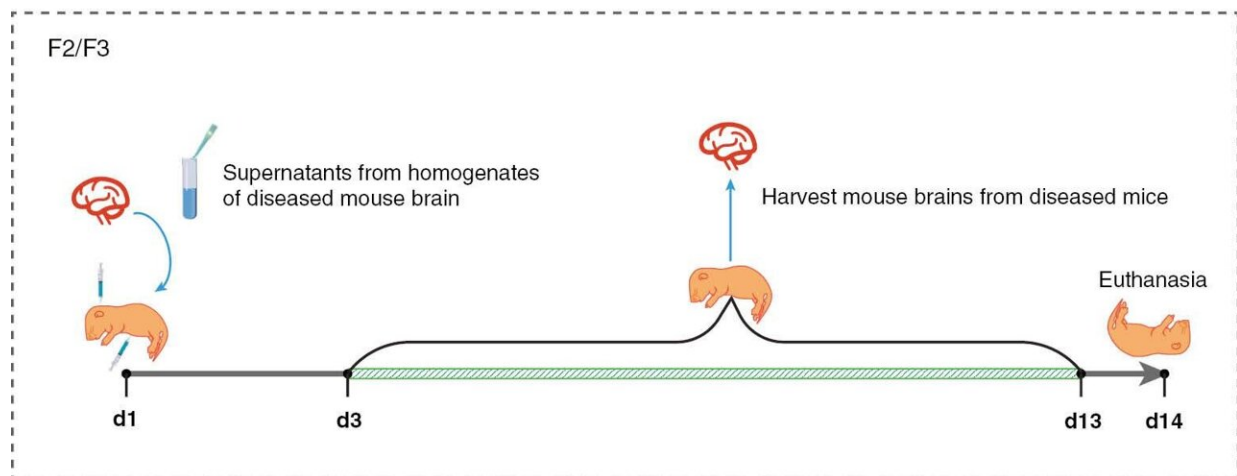
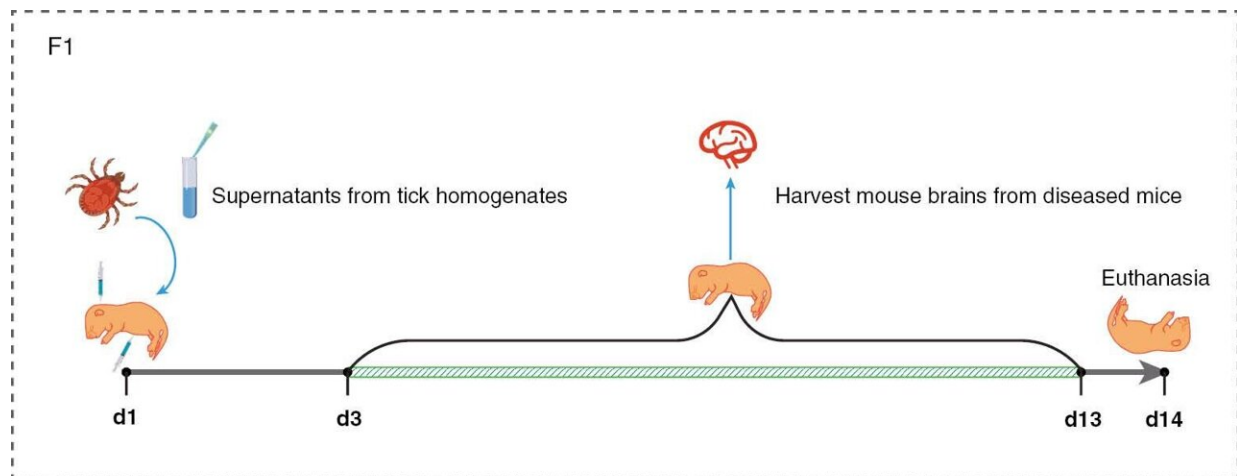


Study describes suckling mouse inoculation to isolate viruses from ticks

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Schematic diagram of the process of suckling mice inoculation of the first (F1), second (F2), and third (F3) generations. For the inoculation process of the F1 generation, supernatants from tick homogenates were prepared and inoculated

intracranially and intraperitoneally into the suckling mice. Mice were observed daily for 14 days after inoculation. During days 3–13, once the mice having disease onset was noted, they were dissected and their brain tissues were harvested. Brain tissues from the F1 inoculation were prepared into homogenates and subsequently inoculated into suckling mice as the second or third passages. The inoculation and observation were performed in the same way as in F1. By the end of the observation period, mice that survived or did not exhibit any symptoms were euthanized. Credit: *Zoonoses* (2023). DOI: 10.15212/ZOONOSES-2023-0023

Suckling mouse inoculation has been used for years to isolate viruses from ticks; however, this method has usually been only briefly described in the literature on a case-by-case basis upon successful isolation rather than providing extensive details.

A new study published in *Zoonoses* describes the procedure from preparation of tick homogenates to identification of virus isolation using the suckling mouse inoculation method. The transient and persistent features were characterized and the incidence of manifestations that developed in the suckling mice, especially in mice from which [viruses](#) were isolated, is reported.

Twenty-two symptoms that developed in mice were identified, including 13 transient symptoms that recovered by the end of the observation period and seven [persistent symptoms](#) that the mice suffered from throughout the observation period.

Persistent symptoms (lateral positioning and dead) and transient symptoms (malaise, emaciation and difficulty turning over) were the main symptoms based on the high overall incidence. Moreover, it was shown that [mice](#) from which viruses were isolated had a concentrated period and advanced days of disease onset.

This study provides detailed information necessary for better use of suckling mouse inoculation to isolate viruses from [ticks](#), which may benefit optimization of this method to identify, discover, and acquire tick-borne viruses.

More information: Shuang Tang et al, Monitoring the Process and Characterizing Symptoms of Suckling Mouse Inoculation Promote Isolating Viruses from Ticks, *Zoonoses* (2023). [DOI: 10.15212/ZOONOSES-2023-0023](#)

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