ID der Kurzfassung : **273**

Borna disease virus 1 infection in organotypic hippocampal slide cultures from adult rats

Inhalt

Borna Disease Virus 1 (BoDV 1) is a zoonotic and neurotropic virus that causes fatal non-suppurative encephalitis in humans, horses, sheep, and alpacas. The white-toothed shrew (Crocidura leucodon) has been identified as a natural reservoir host, harboring a persistent infection without developing neurological impairments. For infection studies, the adult rat serves as a suitable model for studying inflammation in dead-end hosts.
Viability of organotypic hippocampal slice cultures of adult rats was analyzed by LVE/DEAD immunofluorescence staining, LDH assay, PCR of housekeeping genes and morphologic integrity.
In a second step, viral spread, infection patterns, and the local innate immune response were analyzed using immunofluorescence and qPCR to assess viral load.
OHCs were susceptible to infection while maintaining tissue integrity for up to 28 days in culture. Viral distribution was uniform across hippocampal regions, but viral load decreased between days 3 and 7 post-infection (p.i.) before increasing between days 7 and 21 p.i. These results demonstrate that OHCs provide a valuable model for studying viral persistence, distribution, and load in adult rats.

Keywords

Borna, shrew, virus

Registration ID

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Professional Status of the Speaker

PhD Student

Junior Scientist Status

No, I am not a Junior Scientist.

Track Klassifizierung: Emerging Pathogens

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