Persistent bovine pestivirus infection localized in the testes of an immuno-competent, non-viraemic bull

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Abstract

A post-pubertal bull on an artificial insemination station was found to be persistently shedding bovine viral diarrhoea virus (BVDV) in semen over a period of eleven months, while demonstrating no viraemia. Circulating antibodies to BVDV were consistently high, suggesting that the immune system was challenged repeatedly. Post-mortem findings confirmed that the virus was sequestered in the testes of the bull. It is hypothesized that the BVDV in this immuno-competent bull was protected from the bull's immune response by the blood-testes barrier. The barrier becomes functional only at puberty when tight junctions form between adjacent Sertoli cells, suggesting that this bull became persistently infected with BVDV during puberty.

Full text

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