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Cleavage Site of Newcastle Disease Virus Determines Viral Fitness in Persistent Infection Cells

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Highlights

- Lentogenic NDV, as velogenic NDV, was able to persistently infect (PI) BHK-21 cells.
- The cell-free virus-cell spread route of NDV was blocked in PI cells.
- NDV PI cells maintained lentogenic and velogenic virus in a similar trend.
- Velogenic NDV dominated population over passages of persistent co-infection cells.
- The domination was due to spread capacity of velogenic NDV in the special condition.

Abstract

Newcastle disease, caused by the virulent Newcastle disease virus (NDV), poses a risk for the poultry industry. The virulence of NDV is mainly determined by the cleavage site of F protein. Lentogenic NDV can become velogenic after passages in chicken brain and air sac, because the

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