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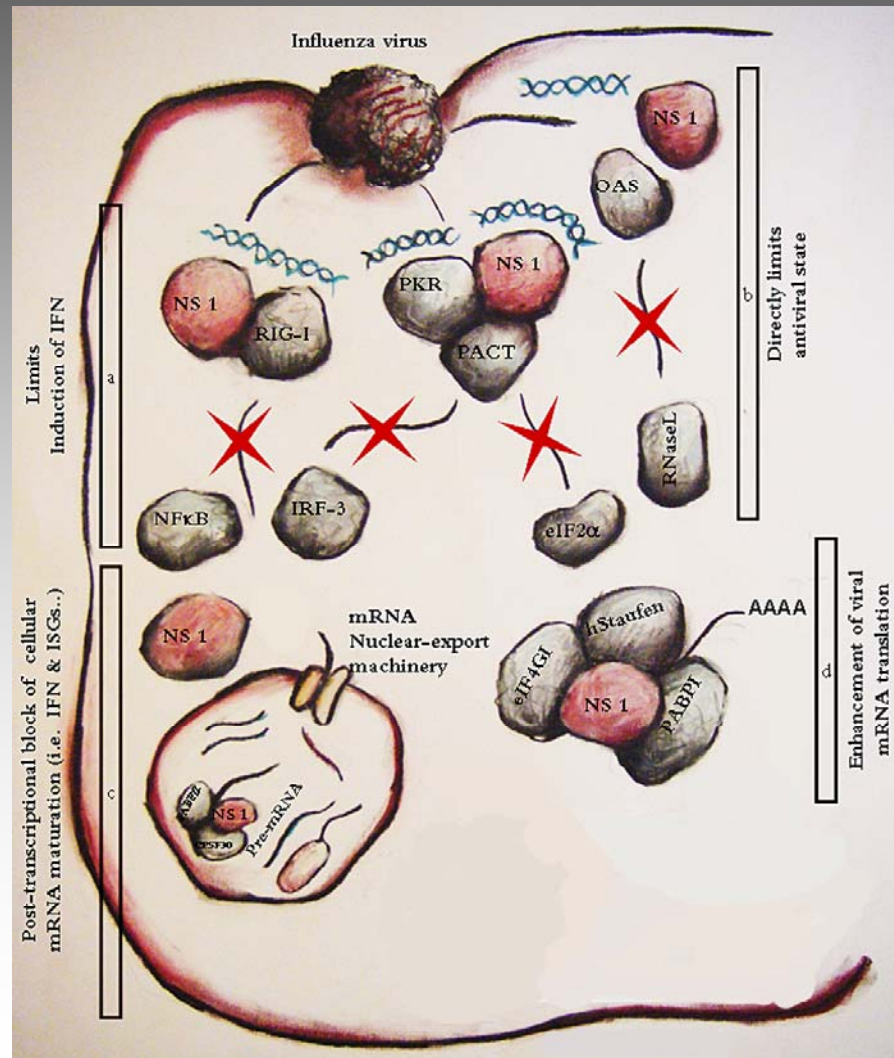
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Avian influenza and its
threats
to other species



The multiple functions of NS1 protein within infected cells





An Avian Influenza A Virus Killing a Mammalian Species — the Mink

Brief Report

By

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With 1 Figure

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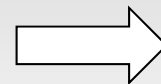
Archives of Virology
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- Mink/84 (H10N4)
- Mallard/85 (H10N4)
- Fowl/85 (H10N4)



Clinical symptoms
Contact infections

- Chicken/49 (H10N7)



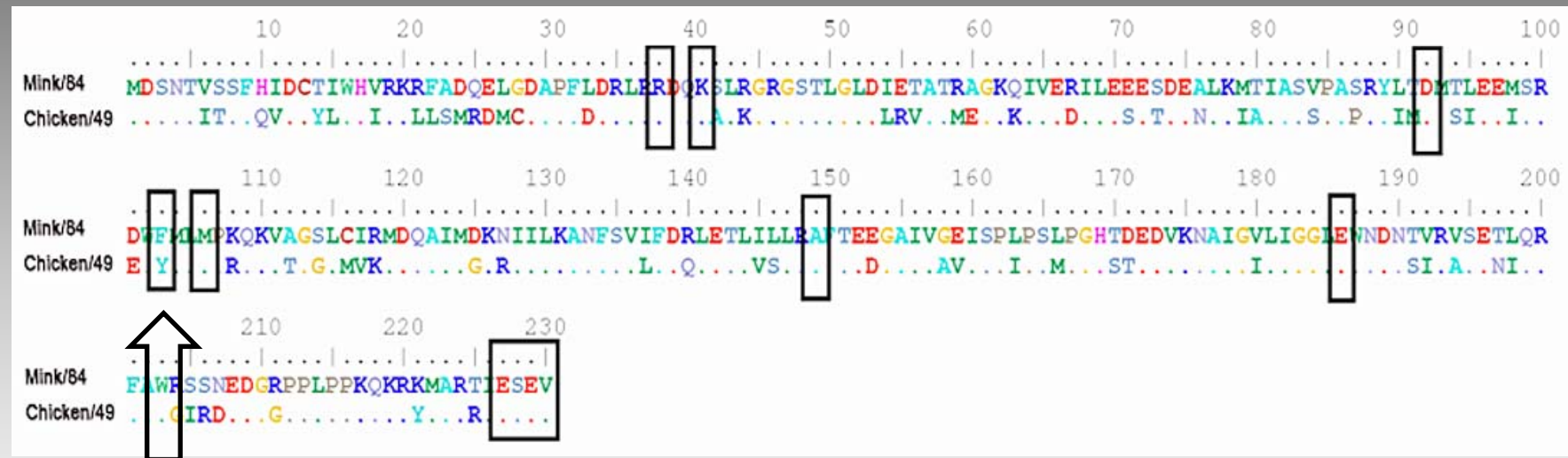
No clinical symptoms
No contact infections

Molecular characterisation

- No differences in receptor specificity or the cleavability of the haemagglutinin proteins of these viruses.
- Phylogenetic analysis revealed a close relationship between the viruses studied.
- Substitution E_(glutamic acid) 627 K_(lysine) in PB2 of Chicken/49

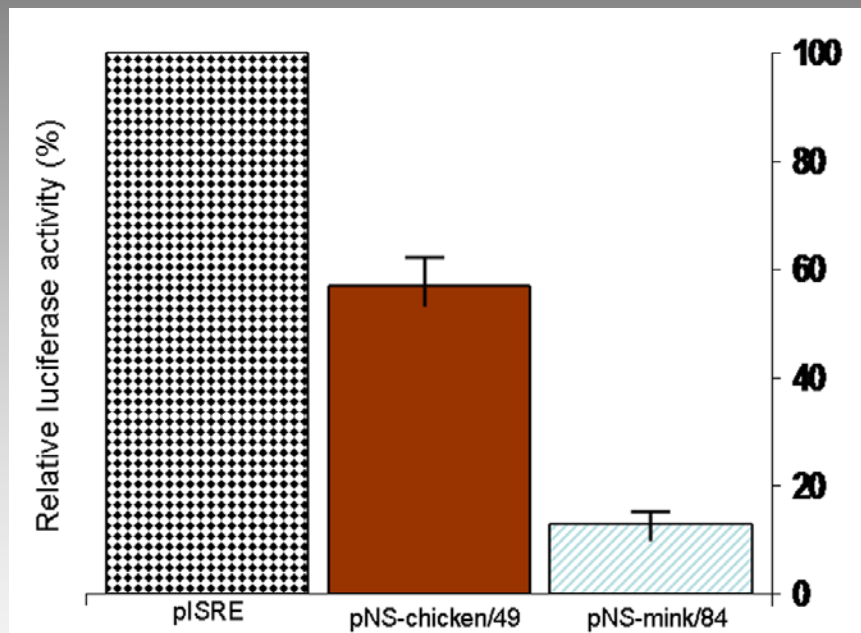
Results

Molecular characterisation

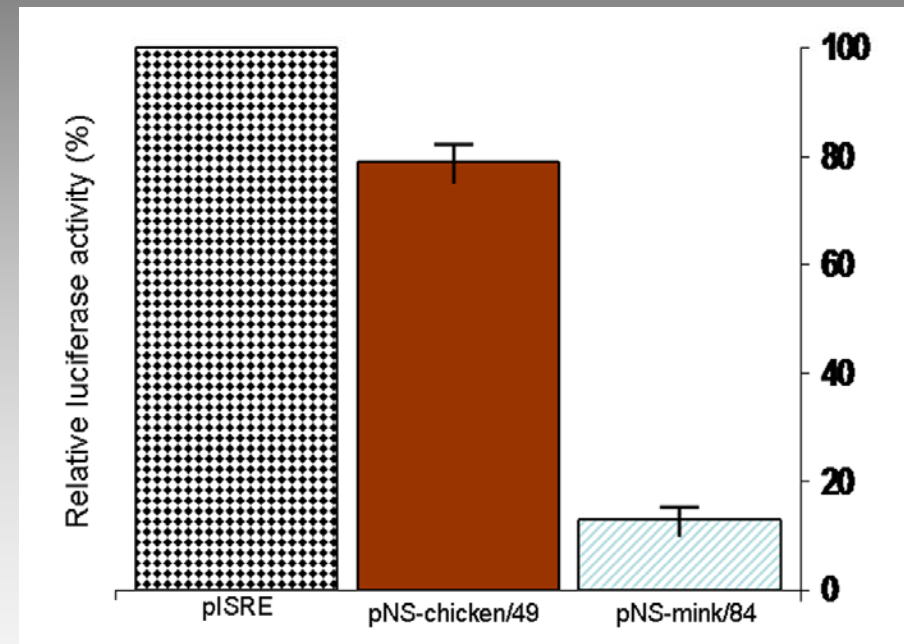


Results

NS1s effect on luciferase reporter gene carrying an Interferon Stimulated Response Element (ISRE)



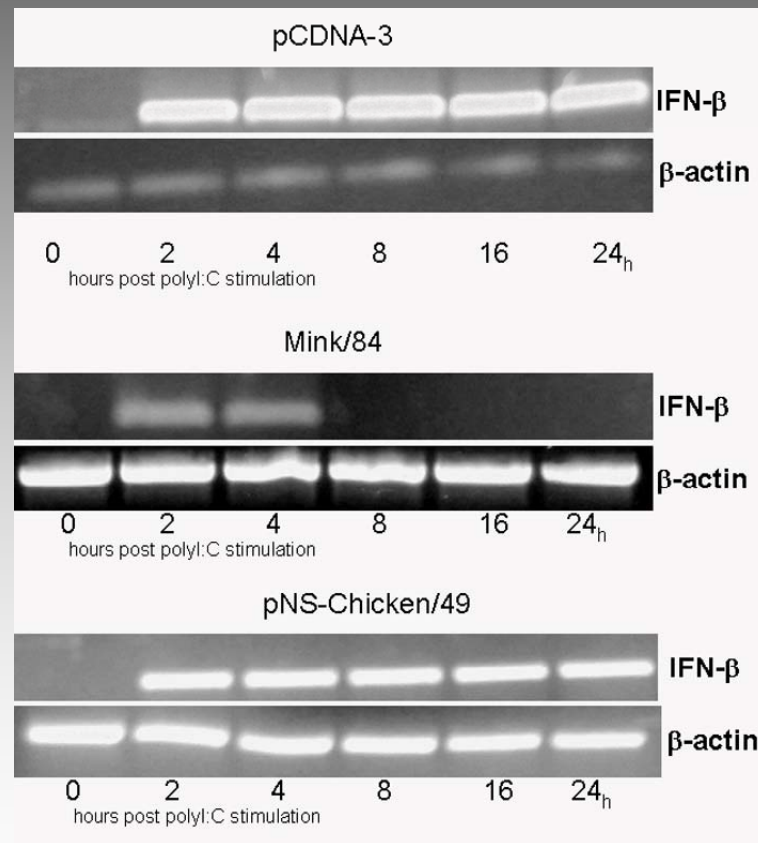
Mink lung cells



A549 cells

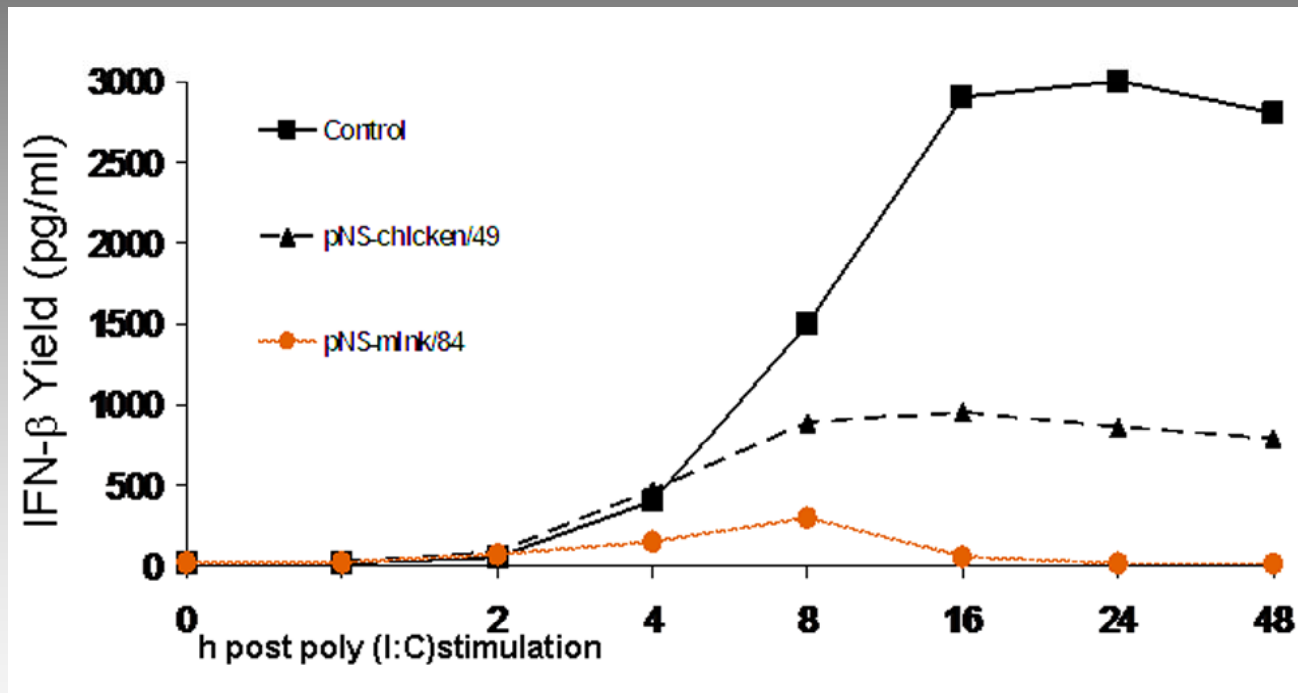
Results

NS1s effect on expression of IFN- β mRNA



Results

NS1s effect on $INF-\beta$ Production



In summary;

we provide evidence for the essential role for NS1 in the early stages of influenza virus infection in mammalian cells.

The results demonstrate that the production of an important cytokine, IFN- β , is affected by the function of NS1 protein.