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Author(s)	HOSHI, Sumio
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**COMPARISON OF ANTIGENICITIES OF AVIAN PARAMYXOVIRUSES
BY USING MONOCLONAL ANTIBODIES AGAINST
TAKA VIRUS**

Sumio HOSHI

*Department of Epizootiology
Faculty of Veterinary Medicine
Hokkaido University, Sapporo 060, Japan*

Monoclonal antibodies against Taka virus, a variant of Newcastle disease virus (NDV), were produced and used to compare the antigenicities of several avian paramyxoviruses including NDV.

Five independent hybrid cell lines (Nos. 1-5), which secreted antibodies against Taka virus, were produced by cell fusion using PEG-1,000 and then cloned. Ascitic fluids were obtained by intraperitoneal inoculation of each hybrid cell in mice and used for both cross hemagglutination inhibition (HI) and neuraminidase inhibition (NI) tests against several avian paramyxoviruses. Both hemagglutination (HA) and neuraminidase activities of Taka virus were inhibited by all ascitic fluids of five clones. Except for clone No. 4, HI titers of ascitic fluids were several 100 times higher than those of the culture fluids of the hybrid cell lines. The ascitic fluids of clone Nos. 1-3 reacted with Taka virus as well as the other NDV strains at the same degree but did not react with the other paramyxoviruses tested. The ascitic fluid of clone No. 5 reacted only with Taka virus, and that of clone No. 4 reacted with Taka virus, Bangor and Yucaipa. The reactive patterns of the cross NI test corresponded with those of the cross HI test.

These results suggested that the hemagglutinin-neuraminidase (HN) glycoprotein of Taka virus possesses at least three different determinants, one of which was common among the NDV strains tested, one specific for Taka virus and the other common with Bangor and Yucaipa. These results also suggested that cross HI test using monoclonal antibodies might be useful in the grouping of NDV strains whose antigenic differences have not been detected by conventional hyperimmune serum.