



Title	ESTABLISHMENT OF MONOCLONAL ANTIBODY-PRODUCING CELL LINES AGAINST H4 INFLUENZA VIRUSES AND ANTIGENIC ANALYSIS OF H4 INFLUENZA VIRUS HEMAGGLUTININ
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CELL LINES AGAINST H4 INFLUENZA VIRUSES AND  
ANTIGENIC ANALYSIS OF H4 INFLUENZA  
VIRUS HEMAGGLUTININ**

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Antigenic relationship among 25 H4 influenza viruses which were isolated from a variety of bird species in different districts of the world was investigated by HI tests using monoclonal antibodies.

Twenty-five H4 influenza viruses were divided into 4 groups based on the reactivity patterns by HI tests with 22 monoclonal antibodies. The first group was comprised of 5 budgerigar and 2 mynah strains which reacted only with anti-A/budgerigar/Hokkaido/1/77 monoclonal antibodies. Four duck strains belonging to the second group reacted with a few anti-A/budgerigar/Hokkaido/1/77 and anti-A/duck/Czechoslovakia/56 monoclonal antibodies. The third group contained 6 duck strains and one of the turkey strains, which reacted only with the monoclonal antibodies to A/duck/Czechoslovakia/56. The other 5 duck strains, a chicken strain and the other turkey strain did not react with any of the monoclonal antibodies tested and formed the fourth group.

The groups based on the antigenic specificity of H4 hemagglutinins coincided with the avian species of origin whether they were parakeets or waterfowls. Monoclonal antibodies thus revealed antigenic heterogeneity of H4 hemagglutinins and host species-related antigenic groups of H4 influenza viruses.