The recombinant turkey herpesvirus vaccine expressing the H5 gene from a clade 2.2 HSNI HPAIV strain (rHVT-H5) inoculated subcutaneously at day-old afforded a good protection of broiler SPF chickens against challenge with two antigenically highly divergent Egyptian HSNI clade 2.2.1 HPAIV [1]. This vaccination was also proved to be highly effective in broilers with HSNI maternally derived antibodies (MDA). The rHVT expressing the F gene from NDV (rHVT-F) inoculated group. These specific humoral immunities tended to be higher in groups vaccinated with one rHVT when compared with the group inoculated with both vaccines, although the difference was not always significant ($P < 0.05$). No NDV-specific IgM and IgA were measured in sera from the 2nd to the 4th week. No AIV-specific IgM and IgA could be detected in sera by our home ELISAs.

When administered separately by subcutaneous route at day-old, the rHVT-AI and the rHVT-ND afforded 100% protection against mortality and morbidity against challenge at 4 and 8 weeks. Complete protection against AIV and NDV was also observed when both vaccines were inoculated simultaneously, except after AIV challenge done at 8 weeks when a somewhat lower protection by 10% could be observed.

NDV-specific humoral immunity (IgG and HI) of both groups was further evaluated at the 2nd week of age. Three weeks old chickens and efficacy were demonstrated against AIV and NDV infection when administered together at day-old. Nevertheless, the specific humoral and cell-mediated immunities tended to be lower in comparison with those induced by the vaccine inoculated alone. Further experiments will be therefore needed, especially in chickens with maternally derived antibody (in progress).

**References**