

## **Abstract**

**Avian influenza surveillance project have been progressed by the National Agricultural Council for several year. Their result shows that low pathogenic strains of both H5 and H7 subtypes exist in the poultry population in Taiwan. After the avian influenza H5N1 subtype has infected human and caused death since 1997, the hypothesis that avian influenza cannot directly infect human being, have been demolished. The outbreaks of avian influenza have swept several Asian countries since the first season of 2004. People died due to the infection of avian influenza have been reported in both Vietnam and Thailand. It shows that avian influenza affects the public health seriously. In this project, we collected 253 serum samples of people, who are working in three chicken abattoirs and two pig abattoirs. To realize whether the avian influenza virus has infect human being in Taiwan, all the samples were evaluated the specific antibody titer against H1, H3, H5 and H7 subtypes of the avian influenza viruses by hemagglutination-inhibition test. In addition, the antibody titers against H1N1 and H3N2 of human influenza viruses and a H1N1 subtype of swine influenza virus were also evaluated. Our results indicated that three cases of the samples and one case of the sample appeared positive reaction against H5 and H7 subtypes, respectively, in the pig abattoir in Taoyuan county. In addition, two cases had positive antibody titer against H5 in a chicken abattoir in Taoyuan city. The specificity of the antibody against avian influenza virus positive samples was further investigated by Western blotting. The results showed only weak positive reaction and were regarded as a false positive due to nonspecific factors. Furthermore, all serum samples showed negative reaction against swine influenza virus. Conclusion: there is not direct evidence to show the low pathogenic strains of avian influenza virus can infect human being in Taiwan. In addition, no evidence of swine influenza infects human being in Taiwan.**

**Keywords : avian influenza ; swine influenza ; human influenza ; abattoir**