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Test to detect bird flu mutants

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Singapore: Australian scientists have developed a new test that can detect bird flu mutation by distinguishing between birds that have been vaccinated against the H5N1 strain of influenza virus and those which have been naturally infected with the virus.

The DIVA (Differentiation of Infected from Vaccinated Animals) test uses a viral protein called Matrix protein 2, which reacts differently with blood serum from vaccinated or infected animals.

Lead researcher, Dr Farhid Hemmatzadeh from the University of Adelaide in Australia, said that with this new, more sensitive test, vaccinated birds with live virus can be identified which effectively prevents the escape of any mutant strain.

"The inability to distinguish between infected and vaccinated birds was a major challenge so far," said Dr Hemmatzadeh. He mentioned that this tests identifies vaccinated birds containing the live virus thus preventing the escape of any mutants.

Dr Hemmatzadeh added that avian flu, which is widely spread in Southeast Asia, was on the top list of notifiable diseases of the World Organization for Animal Health (OIE) because of its high economic cost and risk to human health.

The research published in the journal PLOS ONE concluded that H5N1 virus in birds were the main source of emerging strains of the virus and these new strains may be even more dangerous to birds or humans, raising fears of a global pandemic.