

News in Brief

PROMISING VACCINE AGAINST PANDEMIC H5N1: SINGAPORE RESEARCHERS MAKE AN IMPACT

Singapore researchers Helen Oh, Paul Tambyah and Dale Fisher are part of a team whose H5N1 vaccine research has been published in the 12 June 2008 issue of the very-high impact journal *New England Journal of Medicine*.

Unlike the strains used with yearly influenza virus vaccines, which are grown in eggs, H5 vaccine research has often required genetic modification, as H5 is otherwise lethal to chicken eggs at the embryo stage.

In this latest, ground-breaking research, the research team instead used H5N1 whole-virus vaccine grown on Vero cell cultures in vitro. The vaccines were then tested for the ability to induce antibodies which could neutralise H5N1 strains. Volunteers were vaccinated and their serum subsequently tested.

This vaccine was able to provoke a neutralising immune response against 3 different subtypes (clades) of H5N1 influenza strain - a promising finding.

One strength of the latest cell culture method is that the lead time for vaccine production is



reduced compared to traditional methods. It also eliminates the traditional methods' reliance on chicken eggs with chick embryos within - in a pandemic influenza situation, there may not be adequate chickens and eggs to support the vaccine demand. In contrast, a cell culture system can be easily scaled to industrial size, limited only by bioengineering facility constraints, and the doubling time of cells growing in vitro. ■

(Source: NEJM (2008) 358:2573-2584 Paper; NEJM (2008) 358:2540-2543 Editorial)