

Sir Mark Oliphant Conferences 2008: Frontiers of Science &
Technology

Vaccine and Immunotherapy Technologies

The Shine Dome, Canberra, Australia | 9–11 April 2008

MEDIA RELEASE

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IN PURSUIT OF A SLIPPERY KILLER

Stronger conventional disease control efforts may be necessary to check emerging strains of the H5N1 avian flu virus in Asia because of the difficulty in creating, producing and delivering the vast quantities of vaccines needed to check them.

The challenge of keeping up with a slippery virus that continues to mutate differently in countries across Asia will be outlined by Dr Peter Daniels of the Australian Animal Health Laboratory in an address to the Sir Mark Oliphant Conference on Vaccine and Immunotherapy Technologies in Canberra today.

The World Health Organization says the H5N1 strain of avian flu has so far killed 236 people and millions of poultry in countries such as Indonesia, Vietnam, China, Thailand, Laos, Egypt, Romania, Turkey and Russia. Health authorities say the co-existence of human flu viruses and avian flu viruses creates opportunities for genetic material to pass between viruses that attack different species, leading to the emergence of new, virulent flu strains that may be able to infect and kill humans, resulting in a possible pandemic. For this reason WHO and disease-control centres worldwide regard controlling avian flu on the farm as a top priority.

“Australia is making a major effort to help the Indonesians to keep on top of their avian flu problems, by assisting them to improve their diagnostic capabilities, their monitoring and field responses and in the global effort to develop effective poultry vaccines as a front line of defence,” Dr Daniels says.

New strains of avian flu collected in field surveys in Indonesia were recently used to test the efficacy of existing poultry vaccines - with disturbing results, showing that many of them do not provide the necessary protection against infection by the latest virus strains.

While donors are standing by with millions of dollars to put into proven vaccines, the quest to develop ones that can deal with the most recent strains continues.

”The problem is compounded by the fact that bird flu is evolving separately in all these different countries, and in some cases it may require more than one vaccine per country to deal with the different strains,” he says

Dr Daniels says that with modern reverse genetics technology it is possible to create a new flu vaccine in a relatively short space of time provided all the necessary approvals are in place and a manufacturer is available to mass produce the product.

“But in Indonesia alone something like 1.5 billion poultry go through the system every year. That would require enormous amounts of vaccine, apart from the difficulty in ensuring its use.

“For this reason we are urging that countries like Indonesia put more effort into controlling transmission in the first place – not letting the virus spread, in the same way we checked the spread of horse flu in Australia. We need to stop infected poultry from moving round the country transmitting disease, and to stamp out outbreaks of these new strains at source,” he says.

The Sir Mark Oliphant Conference on Vaccine and Immunotherapy Technologies is being held at the Shine Dome, Canberra from April 9-11, 2008.

The Conference is hosted by Australian Academy of Science (AAS) and the Australian Academy of Technological Sciences and Engineering (ATSE) and sponsored by the Department of Innovation, Industry, Science and Research (DIISR).

Media are welcome to attend and interview participants.

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<http://www.oliphant.org.au/april2008.html>