

Killer plagues not just a Hollywood scenario

November 11 2011



Hollywood's latest killer plague movie *Contagion* is closer to reality than some might think, according to Massey University specialists in the spread of infectious diseases.

With scientists becoming swept up in their praise for the movie that has opened across New Zealand, Professor of Food Safety and Veterinary Public Health Nigel French says it's a scenario the world has already seen – with global pandemics such as the Spanish flu epidemic of 1918 – and could see again.

“It's happened and could happen again but scientifically we're better prepared for it,” Professor French says.

The Spanish flu is a predecessor of the H1N1 strain, which swept the

globe in 2009 but with a lower mortality rate. It struck with far greater virulence in the immediate aftermath of the First World War killing between 50 and 100 million people.

It was believed to have spread via migrating birds to field hospitals in Northern France, which resonates with the premise of the movie in which a deadly virus is transferred from animal to human.

Approximately 75 per cent of emerging human infectious diseases come from animals, says Professor French whose research interests include molecular epidemiology and the control of infectious diseases.

“There are some pretty good examples of diseases crossing over from animals to humans,” he says. He notes that a combination of global travel and the encroachment of urban sprawl on delicate eco-systems continue to make the world vulnerable to the emergence of new diseases and pandemic outbreaks.

His colleague, Professor Mick Roberts, who works as a mathematical biologist at the Albany campus, has made a career out of using mathematical models to predict the spread of [infectious diseases](#).

He has worked for the Ministry of Health on diseases ranging from measles, to flu to severe acute respiratory syndrome (SARS) in Asia in 2003. He was funded by the Health Research Council to analyse the swine flu outbreak in 2009. “They were expecting bird flu but they ended up with swine flu. People are more closely related to pigs.”

Professor Roberts’ computer models anticipate that bird flu will be the next epidemic to break out confirming that the cyclical nature of such large-scale infections is not just the stuff of Hollywood.

Massey University has recently approved the setting-up of a new

Infectious Disease Research Centre (IDReC) dedicated to improving understanding of the emergence and control of infectious disease. Professor French and Roberts are two of the six investigators associated with the new centre.

Provided by Massey University

Citation: Killer plagues not just a Hollywood scenario (2011, November 11) retrieved 6 May 2024 from <https://medicalxpress.com/news/2011-11-killer-plagues-hollywood-scenario.html>

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