

Controversial H5N1 Avian Flu Research Put On Hold For 60 Days

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AsianScientist (Jan. 26, 2012) - The world's leading avian influenza researchers have agreed to temporarily suspend certain experiments that could lead to the creation of highly pathogenic H5N1 influenza viruses capable of human-to-human transmission.

The voluntary 60-day moratorium was announced in a letter published in both *Science* and *Nature* on January 20 this year. The letter was signed by 39 avian influenza researchers from around the world.

The move is in response to growing concerns of a potentially deadly global influenza pandemic if mutant H5N1 viruses that can be transmitted between humans were to be accidentally released from the lab or become available to bioterrorists.

Since its detection in 1997, the highly pathogenic H5N1 influenza virus has devastated the poultry industries and wild bird populations of [numerous countries in Asia](#).

Given the high fatality rate of the virus, it is feared that if H5N1 influenza were to become as transmissible as the ordinary flu in humans, the resulting pandemic would be devastating to the human population.

Although the virus cannot spread easily through the air between mammals, there have been 583 confirmed cases of human H5N1 since 2003 (as of 24 January 2012, according to WHO statistics). Of these, 344 cases (almost 60 percent of all confirmed cases) were fatal, with the latest deaths from the virus [occurring this week in China and Southeast Asia](#).

Modified H5N1 viruses can be transmitted between ferrets

Last year, work by two independent research groups, led by Ron Fouchier of the Erasmus Medical Center in the Netherlands (paper accepted by *Nature*) and Yoshihiro Kawaoka at the University of Tokyo in Japan and University of Wisconsin-Madison in the United States (paper accepted by *Science*), suggest that H5N1 viruses have the potential to spread between mammals.

In their studies, both groups created genetically modified H5N1 viruses that can be transmitted between ferrets, which catch the flu much as humans do. It is not known if the mutant virus can also be transmitted between humans.

These studies generated critical information that advanced our understanding of influenza transmission and can potentially be used to detect and eradicate new strains of H5N1 before they become transmissible between humans and thus prevent future pandemics.

Fears of bioterrorism

However, fears that bioterrorists would try to replicate the studies to generate deadly H5N1 viruses prompted the US National Science Advisory Board for Biosecurity to recommend in December last year that the studies should only be published if certain information detailing how the mutant viruses were created were removed.

Since then, there has been intense public debate in the media on whether the positive public health benefits of these studies outweigh the potential biosafety and biosafety risks of this type of research.

By putting their controversial research on hold, the researchers hope that the journals, together with the research and biosafety community will have time to reach a consensus on how to publish that research, which details to withhold about how the virus acquired transmissibility, and how to make those details available to other researchers.

They also hope that they will have the opportunity to clearly explain how their research is important in preventing future flu pandemics and how it is conducted in a manner which minimizes potential risks.

The full letter can be found at: [Fouchier et al. \(2012\) Pause On Avian Flu Transmission Research](#).

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