

Pause on Avian Flu Transmission Research

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The continuous threat of an influenza pandemic represents one of the biggest challenges in public health. Influenza pandemics are known to be caused by viruses that evolve from animal reservoirs, such as in birds and pigs, and can acquire genetic changes that increase their ability to transmit in humans. Pandemic preparedness plans have been implemented worldwide to mitigate the impact of influenza pandemics. A major obstacle in preventing influenza

pandemics is that little is known regarding what makes an influenza virus transmissible in humans. As a consequence, the potential pandemic risk associated with the many different influenza viruses of animals cannot be assessed with any certainty.

Recent research breakthroughs identified specific determinants of transmission of H5N1 influenza viruses in ferrets. Responsible research on influenza virus transmission

using different animal models is conducted by multiple laboratories in the world using the highest international standards of biosafety and biosecurity practices that effectively prevent the release of transmissible viruses from the laboratory. These standards are regulated and monitored closely by the relevant authorities. This statement is being made by the principal investigators of these laboratories. In two independent studies conducted in two leading influenza laboratories at the University of Wisconsin–Madison and Erasmus MC in Rotterdam, the Netherlands, investigators have proved that viruses possessing a haemagglutinin (HA) protein from highly pathogenic avian H5N1 influenza viruses can become transmissible in ferrets. This is critical information that advances our understanding of influenza transmission. However, more research is needed to determine how influenza viruses in nature become human pandemic threats, so that they can be contained before they acquire the ability to transmit from human to human, or so that appropriate countermeasures can be deployed if adaptation to humans occurs.

Despite the positive public health benefits these studies sought to provide, a perceived fear that the ferret-transmissible H5 HA viruses may escape from the laboratories has generated intense public debate in the media on the benefits and potential harm of this type of research. We would like to assure the public that these experiments have been conducted with appropriate regulatory oversight in secure containment facilities by highly trained and responsible personnel to minimize any risk of accidental release. Whether the ferret-adapted influenza viruses have the ability to transmit from human to human cannot be tested. We recognize that we and the rest of the scientific community need to clearly explain the benefits of this important research and the measures taken to minimize its possible risks. We propose to do so in an international forum in which the scientific community comes together to discuss and debate these issues. We realize that organizations and governments around the world need time to find the best solutions for opportunities and challenges that stem from the work. To provide time for these discussions, we have agreed on a voluntary pause of 60 days on any research involving highly pathogenic avian influenza H5N1 viruses leading to the generation of viruses that are more transmissible in mammals. In addition, no experiments with live H5N1 or H5 HA reassortant viruses already shown to be transmissible in ferrets will be conducted during this time. We will continue to assess the transmissibility of H5N1 influenza viruses that emerge in nature and pose a continuing threat to human health.

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