



Thu 6 Oct 2005

Bird flu virus 'similar to great killer of 1918'

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THE bird flu virus sweeping South-east Asia has chilling similarities to the one that caused one of the world's most deadly disease outbreaks, scientists revealed yesterday.

A team of US researchers also revealed they had recreated the extinct Spanish flu virus - which killed about 50 million people in 12 months over 1918 and 1919 - using genetic material from a victim buried in Alaskan permafrost.

They want to study the virus to find out why it was so lethal and help prepare for the feared bird flu pandemic in humans.

Experts warn bird flu could kill up to 150 million people if it turns into a human infectious disease, as many expect.

Alarmingly, some of the characteristics shared by the two types of flu suggest the current avian form could become highly contagious in humans in one simple step.

Previously it was thought the H5NI avian flu strains would have to infect a human with ordinary flu and then mix together to form a highly lethal contagious disease.

But it now appears this is not necessary. One scientist involved in the new research said the small number of human cases to date suggested the disease "might be acquiring the ability to adapt to humans, increasing [the] pandemic risk".

More than 60 people are known to have died after catching avian flu from birds, out of about double that number of cases. There has been no confirmed report of human-to-human transmission.

Dr Jeffery Taubenberger led a team at the Armed Forces Institute of Pathology in Maryland which sequenced the Spanish flu genome. He said avian flu could develop the infectious properties of the 1918 bug. "The effort to understand what happened in 1918 has taken on a new urgency," he warned.

His research team found that the virus was "probably an entirely avian virus that adapted to function in humans".

They discovered there were a small number of changes in the genetic make-up of the virus that appeared to be "crucial in this process of how a bird-adapted influenza virus becomes adapted to humans".

"[We] further noted that some of these changes were shared by some of the recent, highly



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pathogenic avian H5N1 viruses that have circulated in Asia since 1997 and since 2003 have infected at least 115 people and killed 59.

"This suggests that these H5N1 viruses might be acquiring the ability to adapt to humans, increasing their pandemic risk."

Dr Taubenberger, whose research was being published today by the journal Nature, said work was underway to find out how avian flu viruses turn into human ones.

Professor Ian Jones, a leading virologist at Reading University, said:

"It appears as if this strain jumped directly from chicken to human. It does look very avian-like. What this tells you is that out there within the bird population the mutation can happen in a bird which can allow it to make it across to humans in a single jump.

"This reinforces the need for monitoring and slaughter regimes. Keeping the current H5N1 [avian flu virus] away from the human population is the first line of defence."

The Scottish Executive has begun stock-piling anti-virals to prepare for a possible flu pandemic. It has 170,000 doses and is aiming for 1.3 million, costing £15.6 million.

Half the doses will be available by the end of next March.

Web links

- [Dept of Health - pandemic flu](http://www.dh.gov.uk/PolicyAndGuidance/EmergencyPlanning/PandemicFlu/fs/en)
<http://www.dh.gov.uk/PolicyAndGuidance/EmergencyPlanning/PandemicFlu/fs/en>
- [WHO - Bird Flu fact sheet](http://www.who.int/csr/don/2004_01_15/en/)
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Last updated: 05-Oct-05 23:07 GMT

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