Experts condemn plans to lift ban on research into deadly H5N1 birdflu virus

Exclusive: Leading experts tell The Independent of fears that lethal virus could escape from a research laboratory to cause a deadly flu pandemic

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Plans to lift a voluntary ban on research into the deadly H5N1 birdflu virus have been denounced by leading scientists who are appalled that the work has already led to flu strains that are potentially infectious between humans.

Flu researchers announced the moratorium last January after growing concerns about two experiments funded by the US Government where scientists deliberately mutated H5N1 birdflu to see whether it could be transmitted between ferrets, a standard animal substitute for flu in humans.

The moratorium on deliberately creating highly infectious strains of H5N1 was supposed to last 60 days but has continued for six months.

This weekend, influenza scientists will meet in New York in the hope of lifting the ban and allowing the work to continue.

However, leading experts contacted by The Independent said that lifting the moratorium would be wrong given that a highly-
that lifting the moratorium would be wrong given that a highly transmissible form of H5N1 birdflu - which is known to be extremely lethal to humans - could escape from a research laboratory to cause a deadly flu pandemic.

"The moratorium should be continued until a broader, dispassionate, international discussion can be held to carefully consider the risks and benefits," said David Relman, professor of infectious diseases at Stanford University in California.

"The consequences of misuse or accidental release are potentially catastrophic on the global human and animal populations. Scientists have a deep moral and ethical responsibility to back off...it should not be decided by a group of flu researchers," said Dr Relman, who also sits on the US National Science Advisory Board for Biosecurity.

The meeting in New York is being organised by the US National Institute of Allergy and Infectious Diseases whose director, Tony Fauci, has gone on record as saying that he would like to "expedite as quickly as possible the lifting of the moratorium".

The institute is part of the huge US National Institutes of Health (NIH) which funded the two research projects into highly transmissible H5N1 virus. One was led by Ron Fouchier of the Erasmus University Medical Centre in Rotterdam, the other by Yoshihiro Kawaoka of the University of Wisconsin-Madison.

Richard Roberts, a Nobel prize-winning molecular biologist and expert in genetic engineering, said the moratorium should continue and that many experts are privately appalled that there are plans to lift it but are afraid of speaking out over fears that it might affect their funding from the NIH.

"It's a big mistake at this point. The flu community is behaving as if they are the only show in town. I think for them to be allowed to create the most dangerous virus around is sheer lunacy," said Dr Roberts, who although born in Britain works for a biotech company in New England.

"I'm not so much worried about terrorism but I am worried about an accidental escape from a laboratory. If it's as dangerous as they believe, it could kill half the world's population," he said.
The H5N1 strain of avian influenza has caused the deaths of millions of birds and has decimated the poultry industry but so far it is known to have infected only about 600 people because it cannot be easily transmitted from one person to the next via coughs and sneezes.

However, it has killed six out of ten people it has known to have infected, making it far more lethal for instance than the 1918 strain of flu, even though it killed around 50 million people, about 2 per cent of the estimated number it actually infected.

Stanley Plotkin, a world authority on vaccines at the University of Pennsylvania, has written to Dr Fauci urging him to continue the moratorium. He said that creating a strain of H5N1 virus that is airborne transmissible would be like creating anthrax bacteria that could be easily spread from one person to another.

"History is full of incidents of escape of microorganisms from laboratories, and scientists are not always good at risk evaluation," Professor Plotkin said.

Paul Berg and Stanley Falkow, two veteran scientists at Stanford who helped to organise the Asilomar conference in 1975 where a moratorium on genetic engineering was agreed, have told The Independent that they too oppose lifting the existing ban on H5N1 research.

Professor Berg said that lifting the moratorium is "a bit ludicrous" given that there is no scientific rationale to support an end to the voluntary research ban.

"There should be a serious review and evaluation of the concerns that led to the moratorium and a scientifically rigorous analysis of why the concerns can be managed before the moratorium could be lifted," Professor Berg said.

Professor Falkow said: "The moratorium is essential until such time as there is a dispassionate international meeting to address the issues brought to the fore by the H5N1 affair."

**The view of the experts...**

Two veterans from the Asilomar conference of 1975, when a moratorium on research was agreed, have told The Independent that they too oppose lifting the existing ban on H5N1 research.
moratorium was imposed on recombinant DNA technology, comment on proposals to lift the moratorium on attempts to make highly infectious strains of H5N1 virus:

Paul Berg, Emeritus Professor of Biochemistry, Stanford University School of Medicine:

"Frankly, I don't know who and under what circumstances the moratorium was declared. But once having announced it as being in effect, having the same people declare it undone without some public and clear scientific rationale is a bit ludicrous.

Ostensibly, the moratorium was called because it was perceived that continuing to modifying the H5N1 virus genome could result in serious consequences; what consequences? Does lifting the moratorium mean they now believe there cannot be any serious consequences?

On whose assessment will that decision be made? It seems to me that having raised a caution there has to be a process that either recommends continuing the moratorium, modifies it in a scientifically justifiable way or agrees to lifting the moratorium because the original concerns were unwarranted.

In short, there should be a serious review and evaluation of the concerns that led to the moratorium and a scientifically rigorous analysis of why the concerns can be managed before the moratorium could be lifted. That analysis would logically examine the kind of experiments investigators are planning, what scientific value can be gained by those experiments, how the results will be communicated and very importantly how the products of those experiments (the novel strains being produced) will be monitored and contained to prevent inadvertent release.

The H5N1 debate and the recombinant DNA debate are eerily similar and it's possible that an international meeting of stakeholders, like the one at Asilomar which included representatives of the public could agree on a way to proceed.

Stanley Falkow, Professor Emeritus of Microbiology and Immunology and Medicine, Stanford University:

"I agree that the moratorium ought to be continued. My reasoning is that the moratorium is essential until such time as
there is a dispassionate international meeting to address the issues brought to the fore by the H5N1 ‘affair’. In my judgment there has been a lack of leadership by the scientific community in dealing with this issue. The majority of statements from scientific leaders recently were often self-serving remarks and communications to journals from either biased virologists or those promoting doom and gloom.

What was needed was a plan for a way forward based on the premise that H5N1 was simply an acute exacerbation of a long smouldering problem that was diagnosed in the Fink report a decade ago but still not treated appropriately for over a decade.

In contrast, I believe the behaviour of the scientists in the face of the recombinant DNA discovery in terms of their initiative and responsibility was admirable and this kind of leadership has been notably missing now. Of course, that was over 35 years ago and while there are certainly parallels between the implications for public health and society from the discovery of recombinant DNA technology and similar implications for dual use research, it is a different time and a different world. However, the social responsibility of a scientist remains the same regardless of the time.”