

In the news

SPANISH SECRETS

The reasons for the lethal nature of the 1918 Spanish H1N1 influenza virus, which killed an estimated 50 million people worldwide, have been revealed in a paper published in *Nature* (18 January 2007).

Infection of macaques with a reconstructed H1N1 virus induced a rapid and uncontrolled innate immune response and massive cellular infiltration in the lungs so severe that the animals had to be euthanized on day 8 of a 21-day study.

“Essentially, people are drowned by themselves,” said Yoshihiro Kawaoka of the University of Wisconsin, Madison, USA, and the lead author of the study (*The Guardian*, 18 January 2007).

The study showed that this virus did not activate retinoic-acid-inducible gene I (*RIGI*) in primates, which is an important sensory molecule for the activation of the antiviral immune response.

These observations are important, especially as “we see responses that are similar between humans infected with H5N1 and nonhuman primates infected with the 1918 virus,” according to Kawaoka (*New York Times*, 18 January 2007). However, the H5N1 avian influenza virus (unlike the H1N1 virus) cannot spread easily among humans.

Darwyn Kobasa of the Public Health Agency of Canada told *BBC News* that this research can help us “to better understand influenza viruses and their potential to cause pandemics.” (18 January 2007)

However, not all researchers have greeted these studies with such enthusiasm. Richard Ebright of the Rutgers University of New Jersey, USA, believes that the 1918 influenza virus should never have been reconstructed. “The material is now present in at least two locations”, which increases the risk that the virus could escape (*Nature News*, 17 January 2007).

Does the insight gained into why the virus is so lethal outweigh the potential risks? Only time will tell.

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