

# Spanish flu papers put spotlight on 'dual use' decisions

The publication of the sequence of the 1918 flu virus in *Nature* and the virus' reconstruction in *Science* in October was a landmark in the view of many virologists. But it has also raised concerns that terrorists might recreate the virus. Critics say the case clearly illustrates how little the government can do to keep information that poses a biosecurity threat from getting published.

On 29 September, about a week before the papers were published, Secretary of the US Department of Health and Human Services (HHS) Michael Leavitt called a meeting of the US National Science Advisory Board for Biosecurity (NSABB), which advises the federal government on biosecurity issues.

"[Leavitt] decided that it would be prudent to have one more check done of the papers by the NSABB," says HHS spokesman Bill Hall.

The board concluded that the papers should be published because the benefits outweigh

the risks. But it recommended that the authors add a passage clarifying that the work was conducted safely. The authors complied—but they didn't have to. "Journals have the right to publish what they wish under the First Amendment," Hall says.

Phil Campbell, *Nature's* editor-in-chief, says he was happy to cooperate with the NSABB, but worries that the case could set a precedent for the government's increasing involvement in the publishing process.

Editors from top scientific journals agreed in a meeting in 2003 that they would voluntarily vet submitted papers for information that could be misused (*Nature* 421, 774; 2003). In this case, *Science* asked the authors to talk to officials at US federal agencies. The magazine also consulted a couple of experts who regularly evaluate such papers, says editor-in-chief Donald Kennedy.

Editors at *Nature* say although their paper

went through the usual peer review, the journal did not consult additional biosecurity experts this time. *Nature* has previously published genomes of lethal pathogens, they note, and has consistently been advised that publication is in the public interest.

Concerns that bioterrorists could use the sequence to reconstruct the virus may be overblown, the researchers say. "It's not something you could do in your garage," says Jeffrey Taubenberger, lead author of the *Nature* paper.

Still, the NSABB realized that resurrecting a deadly virus would raise the public's concerns, says biosecurity expert Richard Ebright. Merely adding two sentences to a manuscript isn't enough to address their fears, he says, when the government has no authority to stop publication of research. "Can it really be true," he asks, "that the sole actions of the NSABB were to advise the authors of a PR problem?"

*Andreas von Bubnoff, Washington, DC*