SMALLPOX

# Virus Wins Stay of Execution

**GENEVA**—Few prisoners on death row can have had a more tormented wait for execution than variola, the smallpox virus. Since 1980, when the World Health Organization (WHO) declared smallpox eradicated, the virus has been languishing in two high-security containment centers, one in Russia, the other in the United States. A previous date set by a WHO expert panel for destruction of the 600 remaining samples—31 December 1993—has come and gone, and now a second—30 June this year—also looks like it will pass without an execution.

WHO's executive board was expected to ratify the latest date last week, but board chair Jesús Kumate of Mexico's Independent University aborted the discussion. Prior to the meeting, Kumate told *Science*, many board members from several regions of the world "told me to delay [the decision]. There was just no consensus." Although many scientists have argued against destroying the virus for academic reasons (*Science*, 19 November 1993, p. 1225), a new factor has come into play in this latest decision: Defense agencies in several countries are believed to have pressured their WHO delegations to delay destruction of the virus to permit more work on protective measures.

WHO officials have expressed dismay and frustration at this latest delay. Russian virologist Yuri Ghendon, scientific secretary of the latest expert committee to recommend destruction, says he is "very disappointed. We cannot really say we have rooted out this disease from the planet until we have done away with its cause." Adds WHO Assistant Secretary-General Ralph Henderson, "Now we have to resume our efforts to get consensus. But the final decision won't be taken before 1996 at the earliest."

The debate over what to do with variola has been rumbling on for years. The chief argument of those calling for destruction is that the virus is too dangerous to be allowed to "live." Infected people have a 20% to 40% risk of dying, and in 1967 alone, variola's last year in the wild, it infected some 10 million people. By now, the destructionists say, people will have lost their immunity to variola, and no containment facility is 100% safe against accidental escape of the virus or terrorist attack. "If there was an outbreak today, about a million people could die or go blind from the disease in the several months it would take to get enough vaccine produced," says Ghendon. If researchers want to study the virus, he adds, they can use cloned variola DNA or the nucleotide sequences that have been made of several strains of the virus' genome. "Why anybody would want to study the virus of a disease that no longer exists when there are micro-organisms emerging or re-emerging that are real public health threats today beats me," he says.

Those arguing against immediate destruction say that the slight risk of the virus escaping is outweighed by the wealth of scientific information to be gleaned from the live virus—about its virulence, its pathogenic mechanisms, and its potential in screening drugs for other viral diseases, including AIDS. Destruction of variola, some ecologists argue, would also constitute the first deliberate eradication of a biological species. Donald A. Henderson, who spearheaded WHO's 10-year campaign to eradicate smallpox and is now senior scientific adviser to the U.S. Department of Health and Human Services, is an advocate of early destruction. "There is no doubt that some information will be irrevocably lost by destroying the virus. But it's a hypothetical call as to how useful that [information] would be."

The involvement of defense agencies has added new complexity to the arguments. Behind the scenes at the WHO board meeting last week, the United Kingdom's delegation was lobbying to delay the execution. Graham Pearson, head of the U.K.'s Chemical and Biological Defence Establishment at Porton Down, argues that with no international mechanism for verifying if a state has clandestine stocks of variola, any potential defense against possible future biological threats should be held onto. "What if [such] a state ... changes the virus slightly, so that the existing vaccine is ineffective?" he asks. Samples of the original live virus would be needed to develop rapid tests for smallpox virus attacks as well as new vaccines, he says.

With the death sentence on variola growing ever more complicated, WHO is resigned to a long fight. Says Kumate, "This is too important a matter to settle by a simple majority."

**–John Maurice**

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ITALY

# The Rise of the Technocrats

**TRIESTE**—Some of Italy's top academics are poised to take over the country. Last week, Italy's new prime minister, Lamberto Dini, named a cabinet that has 10 academics among its 20 members. Apart from Dini himself, none of the members of the cabinet were in the previous government, none is an active member of a political party, and only one, environment minister Paolo Baratta, has any ministerial experience.

Italy's top university, La Sapienza in Rome, is especially well represented in the new government. Seven cabinet ministers and four vice ministers are on the university faculty, and several others lecture at La Sapienza occasionally. Indeed, the numbers are enough to worry the university's rector Giorgio Tecce about the drain on his teaching staff.

Among this technocratic cabinet, four are scientists and three are engineers. The new head of the ministry of the universities and scientific and technological research (MURST) is Giorgio Salvini, a nuclear physicist from La Sapienza and vice chair of the prestigious Accademia dei Lincei. Gianni Orlandi, dean of engineering at La Sapienza, told *Science* that Salvini is a "first-class figure, with an intimate knowledge of research and the universities." Orlandi says that Salvini is likely first to aim for stable research funding and will also undoubtedly continue the process begun by his predecessor Stefano Podestà of updating the archaic university appointments system, easing the way to permanent posts for younger researchers.

Salvini's cabinet colleagues from La Sapienza include Adriano Ossicini, a professor emeritus of psychology who chaired the national bioethics committee until the end of last year (*Science*, 20 January, p. 326); he takes over at the ministry of the family. The new minister of health, Elio Guzzanti, is a practicing physician and a specialist at La Sapienza in health system organization. A member of several ministerial health commissions, Guzzanti also chairs the national AIDS committee.

The new government of technocrats has been well received by the public, which seems to be fed up with politicians. Much of the appeal of ex–Prime Minister Silvio Berlusconi was the fact that he was a businessman, not a politician. But like many of Italy's former political elite, Berlusconi resigned last month amid accusations of corruption.

Earlier this week, as *Science* went to press, the new cabinet looked likely to be given a key vote of confidence by the lower house of Italy's Parliament; a subsequent vote in the Senate next week is expected to go the same way. Dispossessed politicians are not so enthusiastic, however: Berlusconi's center-right Forza Italia party has called for fresh elections in the summer, and Senator Elisabetta Alberti Casellati has scoffed that "the wisdom [*sapienza*] of this government isn't enough to make it acceptable."

**–Susan Biggin**

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