

Smallpox InfoBrief #1

Written by Edward Hammond for the Third World Network and smallpoxbiosafety.org, April 2011
First in a series of short informational briefings on the issue of destruction of smallpox virus stocks

Smallpox stocks do not belong to the United States or Russia

For more than a decade, the World Health Assembly's determination to destroy remaining smallpox virus stocks has been frustrated by the refusal of the United States and Russia to join a consensus to fix a date for final virus destruction. The protagonist role of those two countries, which host the remaining smallpox virus repositories¹, has given rise to the mistaken perception that these smallpox stocks are their national assets. For example, hundreds of documents on the Internet, including many news stories, contain phrases such as "US smallpox stocks" or "Russian smallpox stocks".

The perception that these stocks are national assets of the United States and Russia is incorrect. Remaining smallpox virus stocks do not belong to Washington or Moscow. Rather, they are an international resource that was collected and entrusted to the World Health Organization (WHO) many years ago that is now stored in those countries by authorization of the World Health Assembly (WHA). This authorization can be withdrawn or modified by the WHA at any time.

As the natural incidence of smallpox declined in the 1960s and 70s through WHO eradication efforts, the leaders of the WHO Smallpox Eradication Program recognized that laboratory accidents were an increasingly dangerous potential source of new outbreaks. In 1973, a worker at the London School of Hygiene and Tropical Medicine became infected. Although she survived, two visitors to the hospital where the worker was initially confined contracted smallpox and died. Two years later, in 1975, a smallpox-infected chimpanzee escaped from a University of Munich lab, reportedly swinging in the trees of a nearby park for several days before being recaptured.²

Such problems helped spur the WHA to act to reduce the number of labs holding smallpox stocks to an absolute minimum because minimizing smallpox stocks was pivotal to ensuring that the disease did not escape from a lab. In 1976, WHA Resolution 29.54 urged labs to destroy any unnecessary stocks³ and asked the Director-General to consult with the Committee on International Surveillance of Communicable Diseases on future retention of variola (smallpox) viruses.

In 1977, the Committee on International Surveillance of Communicable Diseases returned a recommendation that "*stocks of variola viruses be retained only by WHO Collaborating Centres*". The recommendation was endorsed by the Executive Board (EB59.R28), and by the WHA in 1977 in Resolution 30.52. A year later, the WHA reinforced its position, resolving

¹ Smallpox virus stocks now exist solely at the WHO Collaborating Centres at the Centers for Disease Control and Prevention (CDC), United States and the State Research Center of Virology and Biotechnology (VECTOR), Russia.

² Tucker J. 2001. **Scourge**. Grove Press. New York, pp. 122-23. Also Pennington, H. 2002. **Smallpox Scares**. London Review of Books. 5 September.

³ Fenner F et al. 1988. **Smallpox and its Eradication**. WHO. p. 1339.

in WHA31.54 (1978) that it “*Requests all laboratories except WHO collaborating centres to destroy or transfer their remaining stocks to a collaborating centre*”.^{4,5}

WHO’s attempt to identify remaining laboratory stocks had been ongoing since at least 1975. In 1976, Member States were requested through the WHO Regional Offices to identify labs holding the virus. The labs that were identified were requested to either destroy their stocks or to transfer them to a WHO Collaborating Centre.

In addition to the WHA Resolutions in 1976, 1977 and 1978, in August 1978, yet another accident lent new imperative to the WHO’s effort. At the University of Birmingham in the UK, a medical photographer working above a smallpox lab contracted the disease. Her mother also became infected. Although the mother survived, the photographer died. This was the last recorded case of smallpox globally.

By late 1978, all WHO Member States and territories (except Kampuchea, now Cambodia) had replied to the WHO’s request for information about remaining smallpox stocks. Over three plus years of investigation, the effort had identified 76 laboratories that retained the virus. By November 1978, 65 of these labs had destroyed their stocks or had transferred them to a WHO Collaborating Centre, leaving eleven with virus collections. That some month, the WHO Collaborating Centre in Japan transferred its stocks to the WHO Collaborating Centre at the Centers for Disease Control and Prevention (CDC) in Atlanta, Georgia, reducing the number to ten.⁶

By 1983, the process came to the point at which it remains today, with all stocks either destroyed or transferred to WHO Collaborating Centres in the United States and Russia.⁷ The report of a 1977 technical meeting may have first made the suggestion for those two labs to host the smallpox repositories in the WHO record,⁸ although observers frequently assume the selections were strongly influenced by Cold War political alignments. Although Western Europe initially had two Centres (in the United Kingdom and Netherlands), it appears that the spate of smallpox accidents there contributed to decisions to reduce the number of labs with stocks to two.

Available WHO records do not distinguish between those Member States that destroyed viruses and those that transferred them. As of July 1977, the following countries had virus stocks that were eventually destroyed or transferred:⁹ Kenya, Nigeria, South Africa, Uganda,

⁴ WHO 1979. **Report of Meeting of Officials from Laboratories Retaining Variola Virus and National Control Authorities Concerned.** WHO/SE/79.137.

⁵ WHO 1979. **The Achievement of Global Eradication of Smallpox.** Final Report of the Global Commission for the Certification of Smallpox Eradication. December. WHO/SE/79.152

⁶ WHO 1979. **Laboratories with Variola Virus Stocks.** WHO/SME/78.46. At the time, the Japanese Collaborating Centre was constructing a new laboratory facility. The transfer to the US Collaborating Centre was called temporary. It does not appear, however, that the stocks were ever returned to Japan.

⁷ Fenner F. 1988. p. 1340.

⁸ “*Risk is directly related to the number of laboratories maintaining variola virus stocks. It was recommended that only the WHO Collaborating Centres for Poxvirus Research and the WHO Collaborating Centre for Smallpox Vaccine (herein after called WHO Centres) be repositories of variola virus and this number should be subject to periodic review.*” WHO. 1977. **Report of a Workshop on Safety Measures in Laboratories Retaining Variola Virus.** WHO/SME/77.2. Although a Centre in the Netherlands was subsequently designated for vaccine research, as is clear in the document, the labs referred to are Centres in the United States and Soviet Union.

⁹ This list is not a final compilation. It is based upon WHO. 1977. **Progress Report on Register of Laboratories Retaining Variola Virus.** WHO/S2/180/3.

Zimbabwe (“Southern Rhodesia”), Argentina, Brazil, Canada, Chile, Guatemala, United States, Uruguay, Iran, Pakistan, Belgium, Denmark, Germany, Netherlands, Poland, Sweden, Switzerland, Russia (Soviet Union), United Kingdom, Yugoslavia (present Member State unclear), Bangladesh, India, Indonesia, Sri Lanka, Thailand, and Japan. China subsequently reported stocks, which were later destroyed.

Thus, while the Collaborating Centres in Russia and the United States have been the sole virus repositories for 28 years, the current locations of the virus stocks does not change the fact that the viruses were transferred to WHO Collaborating Centres under the auspices of WHA resolutions and the WHO Smallpox Eradication Program. To this day, provided that relevant safety conditions can be met, there is no fundamental reason why a WHA resolution could not replace the Russian or United States labs with a new WHO authorized repository to manage the virus stocks.¹⁰

Thus, in summary, despite the location of the two WHO authorized repositories, neither the United States nor Russia has greater claim to the remaining smallpox stocks than the many other countries that participated in the WHO Smallpox Eradication Program. The stocks are therefore not unilateral assets of any country; rather, they were assembled at WHO Collaborating Centres for safekeeping, pursuant to WHA resolutions.

Because the stocks are an international asset created by a multilateral effort under the auspices of the WHO, Member States of the WHO need not defer to the United States or Russia due to any misperception that those countries are being asked to destroy national possessions. They are not. The smallpox virus stocks are international resources, which the global community, through numerous WHA Resolutions, has resolved to destroy. Furthermore, Member States should bear in mind that the decision to store these viruses in the United States and Russia requires ongoing WHA authorization, which may be modified or rescinded at any time.

**The 1970s WHO documents cited in this briefing may be accessed online at:
<http://www.smallpoxbiosafety.org/resources.html>**

¹⁰ This is not suggested as a practical course of action. Rather, the example is presented to illustrate the WHA’s unexercised potential to control the virus stocks.