



# FRANK FENNER AC

*Frank Fenner in the Hall in 2009, when handing over the set of bifurcated needles for the Museum's collection.*

**Emeritus Professor Frank Fenner AC was a highly respected member of the scientific community. Numerous tributes have been paid to him across Australia and the world since his passing in November 2010, honouring his research achievements, dedication, generosity and philanthropy.**

Born in Ballarat in 1914, Frank Fenner received Bachelor degrees and then a Doctor of Medicine in 1942 at the University of Adelaide. He enlisted in the Army Medical Corps after his resident year, completing a Diploma of Tropical Medicine at the University of Sydney and serving as a malariologist with the Australian forces in Palestine, New Guinea, Morotai and Borneo. After the war, Fenner studied the ectromelia virus (mousepox) at the Walter and Eliza Hall Institute of Medical Research, and was appointed Professor and Chair of Microbiology at the new John Curtin School of Medical Research at The Australian National University in 1949, where he began studying the myxoma virus and its use in the eradication of rabbits. He was made a Fellow of the Australian Academy of Science in 1954, and served as chair and member of, and donor to numerous Academy committees and projects.

Professor Fenner's contributions to The Australian National University (ANU) were significant. He was Director of the John Curtin School of Medical Research from 1967 to 1973, and foundation Director of the Centre for Resource and Environmental Studies at the ANU from 1973 to 1979. After retiring at the end of 1979, Fenner remained at the ANU, working on a number of research projects and publications. His many contributions to the ANU were recognised with the Frank Fenner building, Fenner Hall and the Frank Fenner School of Environment and Society named in his honour.

In 1977 Professor Fenner was appointed Chairman of the World Health Organisation's Global Commission for the Certification of Smallpox Eradication. He was given the task of investigating the last reported cases of smallpox in given countries, and certifying that no new cases had emerged. In May 1980, Professor Fenner presented the commission's final report to the 33rd World Health Assembly, and the decision to declare the world free of smallpox was approved unanimously. Following the success of the smallpox eradication campaign, Fenner coordinated the official documentation of the campaign and was general editor of the book, *Smallpox and its eradication*.

For his work on the smallpox campaign Professor Fenner was honoured with a number of awards and prizes, including the Anzac Peace Prize (1980), The Stuart Mudd Award of the International Union of Microbiological Societies (1986), World Health Organisation Medal (1988), and he shared the Japan Prize (Preventative Medicine) with the first two Chiefs of the World Health Organisation Smallpox Eradication Unit, Drs Henderson and Arita (1988).

Fenner also received many awards recognising his pioneering work in virology and microbiology, including the Mueller and Matthew Flinders Medals (1964 and 1967), the Britannica Australia Award for Medicine (1967), the Burnet Medal (1985), the Prime Minister's Prize for Science (2002), and, internationally, the Copley Medal of the Royal Society of London (1995), and the Albert Einstein World Award for Science (2000).



Detail of bifurcated needles and their container.  
Photos: Roslyn Russell

Professor Fenner published numerous articles and books on his research and scientific endeavour in Australia, many released during his active retirement as a 'perpetual Visiting Fellow' in the John Curtin School of Medical Research. In 2005 he was editor of *The Australian Academy of Science: The First Fifty Years*, and in 2006 ANU E Press published his autobiography, *Nature, Nurture and Chance: The Lives of Frank and Charles Fenner*, which included a biography of his father, Charles Fenner.

In 2009, the National Museum contacted Professor Fenner in the hope of securing a piece of memorabilia from his career for the National Historical Collection. In response, Fenner offered to donate a set of bifurcated needles, a souvenir from his work in the smallpox eradication campaign. When making the donation, Professor Fenner expressed his belief that the development of the bifurcated needle was 'a major technical breakthrough in the ability to control smallpox'.

Invented by Dr Benjamin A Rubin of Wyeth Laboratories, and patented on 13 July 1965, the bifurcated needle became the World Health Organisation's preferred instrument and standard method for delivering the smallpox vaccination during its intensified smallpox eradication campaign. Made of strong steel that would not rust, the needles were supplied in small containers which could be placed in boiling water to sterilise the needles for multiple usage, and dispensed the needles one at a time aseptically through a small hole.

The bifurcated needles were simple to use, produced at low cost and provided standardised administration of the vaccine in small amounts. During the campaign, the World Health Organisation procured approximately 50 million bifurcated needles.

Professor Fenner was a long-time supporter of the National Museum and a member of the Friends of the National Museum of Australia since 2000. It is fitting that this small artefact from the smallpox eradication campaign, for which Fenner is probably best remembered, is now part of the National Historical Collection. This collection and his many other legacies will ensure that Professor Fenner's long and distinguished career will be remembered and celebrated into the future.

**Jennifer Wilson**  
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