



Impact of Virus Research on the Health Sciences: Nobel Laureates and the Nobel Prize



- 1946 – [Wendell Stanley](#) (Chemistry) – first virus crystallization (tobacco mosaic virus) and revealed ribonucleoprotein nature
- 1951 – [Max Theiler](#) (Medicine) – developed yellow fever virus vaccine
- 1954 – [John Enders](#), [Thomas Weller](#), [Frederick Robbins](#) (Medicine) – growth of polio virus in cell culture
- 1958 – [Joshua Lederberg](#) (Medicine) – proved virus gene transfer to host cell (transduction)
- 1966 – [Peyton Rous](#) (Medicine) – discovery of tumor-inducing viruses (Rous sarcoma virus)
- 1965 – [François Jacob](#), [André Lwoff](#), [Jacques Monod](#) (Medicine) – discovery of lysogeny (prophage); virus gene expression
- 1969 – [Max Delbrück](#), [Alfred Hershey](#), [Salvador Luria](#) (Medicine) – foundational molecular biology studies of virus replication
- 1975 – [David Baltimore](#), [Renato Dulbecco](#), [Howard Temin](#) (Medicine) – growth of retroviruses in culture; discover of reverse transcriptase
- 1976 – [Baruch Blumberg](#) and [Carleton Gajdusek](#) (Medicine) – discoveries of hepatitis B virus and prions
- 1978 – [Werner Arber](#), [Daniel Nathans](#), [Hamilton Smith](#) (Medicine) – discovery of antiviral restriction-modification system (restriction enzymes) and applications
- 1980 – [Paul Berg](#), [Walter Gilbert](#), [Frederick Sanger](#) (Chemistry) – created recombinant DNA viruses (simian virus 40, SV40); DNA sequencing methods used to sequence virus DNAs (phiX174)
- 1982 – [Aaron Klug](#) (Chemistry) – virus structure (tobacco mosaic virus) determination by x-ray crystallography
- 1989 – [J. Michael Bishop](#) and [Harold Varmus](#) (Medicine) – discovery of oncogenes in retroviruses, and the molecular genetic basis of cancer
- 1993 – [Richard Roberts](#) and [Philip Sharp](#) (Medicine) – discovery of RNA splicing in adenoviruses

1996 – [Peter Doherty and Rolf Zinkernagel](#) (Medicine) – immune recognition and destruction of virus-infected cells using lymphochoriomeningitis virus, and the defining of cell-mediated immune response by cytotoxic T-cells

1997 – [Stanley Prusiner](#) (Medicine) – discovery of the infectious nature of prions

2008 – [Harald zur Hausen, Françoise Barré-Sinoussi, Luc Montanier](#) (Medicine) – discoveries of human papillomavirus and human immunodeficiency virus