



WHO/FAO PROGRAMME ON COMPARATIVE VIROLOGY

The WHO/FAO Programme on Comparative Virology was initiated in the early 1970's to coordinate research and the establishment of standard procedures and reagents. More than 100 laboratories in the world joined to form 15 international working teams. The objectives of the programme have now largely been met.

The wide institutional framework eventually led to the establishment of two WHO collaborating centres: WHO Collaborating Centre for Research and Training in Veterinary Public Health at the Veterinary Research Institute, Brno, Czechoslovakia, and the WHO Collaborating Centre for Collection and Evaluation of Data on Comparative Virology at the Institute of Medical Microbiology, Infectious and Epidemic Disease, Veterinary Faculty, University of Munich, Munich, Federal Republic of Germany. The collaborating centres undertook to establish an inventory of virus strains and antisera which is contained in this document.

The World Health Organization is grateful for the sustained collaboration of all parties concerned with the programme.

ANIMAL VIRUSES

CATALOGUE OF THE SOURCES OF VIRUS STRAINS AND ANTISERA

prepared by

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The viruses have been arranged according to their numerical code and nomenclature in accordance with CAPM procedures.

Following the list of viruses, are the addresses of persons and laboratories from which the virus strain (V:) or the antiserum (AS:) is available. Reference strains, working reagents and new isolates are listed.

The list of reagents and addresses is not exhaustive. Any additions would be most welcome and should be sent to CAPM, Veterinary Research Institute, 621 32 Brno, Czechoslovakia.

We wish to thank the contributors who have sent lists of stored strains, as well as for information on newly isolated animal viruses.

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Les opinions exprimées dans les documents par des auteurs cités nommément n'engagent que lesdits auteurs.

1100 ADENOVIRIDAE

Mastadenovirus

- 1110 porcine adenovirus V: 1,3,59,66,81,135 AS: 59,66,134  
1120 bovine adenovirus V: 1,66,80,88,89,96,135,244 AS: 59,66,135  
1130 ovine adenovirus V: 88,95,108,136,147 AS: 136  
1140 equine adenovirus V: 40,80,148 AS: 40,148  
1150 human adenovirus V: 1,5,30,55,86,120,226,244,255 AS: 48,59,  
226,259

1160 other mammalian adenoviruses

- 1161 caprine adenovirus  
1162 rabbit adenovirus V: 3,135  
1163 canine adenovirus V: 1,55,75,80,103 AS: 59,66  
1164 feline adenovirus  
1165 murine adenovirus V: 1,248  
1166 simian adenovirus V: 1,151,224 AS: 151,224  
1167 squirrel adenovirus V: 152 AS: 152  
1168 guinea pig adenovirus V: 75

1170 Aviadenovirus V: 135

- 1171 fowl adenovirus (CELO, GAL aj.) V: 1,80,96,136,247 AS: 136  
1172 turkey adenovirus V: 1,153 AS: 153  
1173 goose adenovirus  
1174 quail bronchitis virus  
1175 egg drop syndrome (haemagglutinating) virus V: 154 AS: 136,154  
1176 duck adenovirus V: 1,96,104

1190 other adenoviruses

- 1191 amphibian adenovirus

1200 ARENAVIRIDAE

- 1201 lymphocytic choriomeningitis virus V: 1,5,55,82,88 AS: 150

1300 BUNYAVIRIDAE V: 5,39,74,79,80,82,86,254

- 1301 Nairobi sheep disease virus V: 130,156 AS: 130  
1302 Rift Valley fever virus V: 239  
1303 Akabane virus V: 39,155,223 AS: 155  
1304 Aino virus V: 39  
1305 Dugbe virus V: 39

1400 CALICIVIRIDAE

Calicivirus

- 1401 Vesicular exanthema virus of swine V: 80  
1402 feline calicivirus V: 1,3,14,21,27,80 AS: 3,27,118  
1403 bovine calicivirus  
1404 canine calicivirus  
1405 cetacean calicivirus (Tursiops-1)

## 1500 CORONAVIRIDAE

Coronavirus1510 Porcine

- 1511 transmissible gastroenteritis virus V: 1,3,76,89,93,96,106,246  
AS: 59,93
- 1512 haemagglutinating encephalomyelitis virus V: 1,3,76,89,91,92,  
96 AS: 91,92
- 1513 corona-like virus (epizootic diarrhoea virus) V: 91 AS: 91

1520 Bovine

- 1521 neonatal calf diarrhoea virus V: 1,88,89,94,95,97 AS: 94

1530 Ovine V: 881540 Equine1550 Human V: 30,75,81,121

- 1551 human coronavirus V: 1,5,121,157,226,255 AS: 157,258

1560 other mammalian coronaviruses

- 1561 murine hepatitis virus V: 1,57,82,122 AS: 57,71
- 1562 rat coronavirus V: 1,71,72 AS: 57,71
- 1563 rat sialodacryadenitis virus V: 122 AS: 122
- 1564 canine coronavirus V: 1,89
- 1565 feline coronavirus V: 1,31,41,75 AS: 27,31,118
- 1566 rabbit coronavirus V: 1

1580 Avian

- 1581 infectious bronchitis virus V: 75,96,247
- 1582 turkey blue-comb disease virus V: 1,123,138 AS: 138

## 1600 HERPESVIRIDAE or HERPETOVIRIDAE

1610 Porcine herpesvirus

- 1611 Aujeszky's disease virus V: 1,3,55,70,76,79,80,82,86,96,  
103,119,135,214,255,264  
AS: 70,139,264

- 1612 porcine cytomegalovirus V: 89,124,140 AS: 124,140

1620 Bovine herpesvirus V: 3,255

- 1621 infectious bovine rhinotracheitis virus V: 1,3,32,76,80,88,  
89,95,96,119,135,  
141,142,143,144

- 1622 bovine herpes mammillitis virus V: 3,10,11,80,82,88,95,135,  
144,253 AS: 144

- 1623 malignant catarrhal fever virus V: 3,88,95,223,229  
 1624 bovine "orphan" herpesvirus V: 32,135
- 1630 Ovine herpesvirus V: 145 AS: 145
- 1631 sheep pulmonary adenomatosis virus V: 88,95
- 1640 Equine herpesvirus V: 75,80,82
- 1641 equine rhinotracheitis virus V: 1,3,29,40,96,126,135,236  
 AS: 40,59,236
- 1642 slow-growing equine herpesvirus V: 1,40,126,146 AS: 40,59,146  
 1643 coital exanthema virus V: 1,40,148,149 AS: 40,149
- 1650 Human herpesvirus V: 30,75,79,83,86 AS: 259
- 1651 herpes simplex virus V: 1,5,39,55,120,226,244,255 AS: 48,226  
 1652 varicella zoster virus V: 1,5,39,90,226,237,255 AS: 48  
 1653 human cytomegalovirus V: 1,5,30,75,77,79,86,120,244,255  
 AS: 48,259
- 1654 Epstein-Barr virus V: 1,5,120,255
- 1660 Other mammalian herpesviruses
- 1661 caprine herpesvirus V: 233,240,241,242 AS: 233  
 1662 rabbit herpesvirus V: 1  
 1663 canine herpesvirus V: 1,159 AS: 159  
 1664 feline herpesvirus V: 1,75,80  
 1665 murine herpesvirus V: 3,75,167  
 1667 guinea pig herpesvirus V: 1  
 1668 guinea pig herpes-like virus V: 1 AS: 160
- 1670 Avian herpesviruses
- 1670.1 quail herpesvirus V: 3  
 1670.2 stork herpesvirus V: 3,161  
 1670.3 owl and eagle-owl herpesvirus V: 3  
 1671 avian infectious laryngotracheitis virus V: 1,3  
 1672 Marek's disease virus V: 1,112,125,162,163 AS: 162  
 1673 turkey herpesvirus V: 1,17,225 AS: 17  
 1674 duck plague virus V: 1  
 1675 pigeon herpesvirus V: 3,164,165,166 AS: 165  
 1676 cormorant herpesvirus V: 1  
 1677 parrot herpesvirus V: 1,3 AS: 1  
 1678 falcon herpesvirus
- 1680 Fish herpesviruses
- 1681 herpesvirus salmonis V: 1,167  
 1682 channel catfish virus V: 1 AS: 167
- 1690 Other herpesviruses
- 1691 reptilian herpesviruses  
 1692 amphibian herpesviruses

## 1700 IRIDOVIRIDAE

Iridovirus

- 1701 african swine fever virus V: 80,243 AS: 223  
 1702 lymphocystis virus V: 1  
 1703 frog virus V: 1,80  
 1704 gecko virus  
 1705 iridescent viruses of insects

## 1800 ORTHOMYXOVIRIDAE

Influenzavirus AS: 259

- 1810 influenza virus A/ V: 49,52,226,238,244,251,255 AS: 48  
 1811 influenza virus A/swine V: 3,5,80,82,115 AS: 226  
 1812 influenza virus A/equine V: 3,5,29,80,82,238 AS: 59,226  
 1813 influenza virus A/human V: 1,5,30,55,75,80,81,82,86,238  
 1814 influenza virus A/avian V: 1,3,5,76,80,82,109  
 1830 influenza virus B V: 1,5,30,55,75,80,81,82,86,168,169,244  
 1850 influenza virus C V: 1,5,30,55,75,80,81,82,86,171 AS: 169,170

1900 PARAMYXOVIRIDAE V: 2511910 Paramyxovirus AS: 259

- 1911 Newcastle disease virus V: 1,3,5,55,75,76,82,89,96,128,226,  
247,255  
 1912 Mumps virus V: 1,5,55,84,89,226,244,255 AS: 128,226  
 1913 parainfluenza virus type 1 V: 1,5,30,55,75,79,80,81,82,86,  
128,226,244,255 AS: 226  
 1914 parainfluenza virus type 2 V: 1,5,30,55,75,79,80,81,82,86,  
226,244,255 AS: 226  
 1915 parainfluenza virus type 3 V: 1,3,5,30,55,75,79,80,81,82,86,  
96,108,119,226,244,255,263  
AS: 48,226  
 1916 parainfluenza virus type 4 V: 1,5,30,55,75,79,80,81,82,86, 244  
 1917 parainfluenza virus simian V: 224 AS: 224  
 1920 Avian paramyxoviruses V: 1,104,109,115 AS: 128  
 1921 turkey parainfluenza virus V: 115  
 1922 Yucaipa paramyxovirus V: 1,128  
 1923 parrot paramyxovirus  
 1924 duck paramyxovirus V: 115  
 1925 goose paramyxovirus  
 1926 pigeon paramyxovirus

1930 Morbillivirus

- 1931 measles virus V: 1,5,30,55,75,79,80,81,84,86,226,244,255  
AS: 48,59,226,259  
 1932 canine distemper virus V: 3,55,69,75,80,82,90,103,255 AS: 69

1933 rinderpestvirus V: 80,127,156,172,173,225 AS: 127,173  
 1934 peste des petits ruminants virus V: 80,174,223 AS: 174

1950 Pneumovirus

1951 respiratory syncytial virus (human) V: 1,5,30,55,75,80,81,  
 226,244,255  
AS: 48,226,259  
 1952 bovine respiratory syncytial virus V: 1,3,32,80,88,89,95,108  
 1953 pneumovirus of mice V: 1,86  
 1954 caprine respiratory syncytial virus V: 108

## 2000 PAPOVAVIRIDAE

2010 Papillomavirus V: 250

2011 Shope papillomavirus of rabbits  
 2012 human wart virus V: 1,75  
 2013 bovine papillomavirus V: 1,75,80  
 2014 equine papillomavirus  
 2015 caprine papillomavirus  
 2016 ovine papillomavirus V: 75,80  
 2017 canine papillomavirus  
 2018 hamster papillomavirus  
 2019 simian papillomavirus V: 224 AS: 224

2030 Polyomavirus V: 86,90,120

2031 murine polyoma virus V: 1  
 2032 SV 40 (vacuolating agent) V: 1,30,86,90  
 2033 K virus of rabbits  
 2034 rabbit kidney vacuolating virus  
 2035 BK virus from human urine V: 1  
 2036 JC virus from human multifocal leukoencephalopathy  
 2037 Budgerigar fledglings disease virus V: 202 AS: 202

## 2100 PARVOVIRIDAE

2110 Parvovirus

2111 bovine parvovirus V: 3,76,89,97  
 2112 porcine parvovirus V: 1,3,76,97,175 AS: 59  
 2113 canine parvovirus V: 1,75,229  
 2114 feline panleukopenia virus V: 1,103  
 2115 goose hepatitis virus V: 42,104,129 AS: 129  
 2116 rat virus (Kilham) V: 1,3,57,176,177,178 AS: 57,178  
 2117 possible: human gastroenteritis virus  
 2118 parvovirus TVX (tumor virus X)  
 2119 H 1 V: 1,3,30,57,114,179 AS: 3,57  
 2120 LU III V: 1,30  
 2121 Minute virus of mice (Crawford) V: 1,3,57 AS: 3  
 2122 rabbit parvovirus  
 2123 human parvovirus V: 89  
 2124 RT virus

2130 Dependovirus

- 2131 human adeno-associated virus V: 1,3,55  
 2132 bovine adeno-associated virus  
 2133 avian adeno-associated virus V: 1,42,180 AS: 1,42,180  
 2134 equine adeno-associated virus  
 2135 canine adeno-associated virus V: 109

2150 Densovirus

- 2151 Aleutian disease virus V: 1,103,181,182,183 AS: 181,183  
 2152 viruses of invertebrates

## 2200 PICORNAVIRIDAE

2210 Enterovirus

- 2211 bovine enterovirus V: 1,3,34,75,76,80,88,89,119 AS: 34  
 2212 porcine enterovirus V: 1,3,59,75,76,80,88,89,96,99 AS: 59  
 2213 avian encephalomyelitis virus V: 1,96  
 2214 duck hepatitis virus V: 1,3  
 2215 murine encephalomyelitis virus V: 1,82,266,267 AS: 267  
 2216 human poliovirus V: 1,5,30,55,75,80,84,85,99,226,255,256  
AS: 48,226,256,259  
 2217 human enterovirus V: 1,5,30,55,80,85,244,255 AS: 226  
 2218 coxsackie A virus V: 1,30,5,55,80,87,226,255 AS: 48  
 2219 coxsackie B virus V: 1,5,55,99  
 2220 simian enterovirus V: 1,224 AS: 224  
 2221 porcine encephalomyocarditis virus V: 264 AS: 264  
 2222 swine vesicular disease virus V: 80,184 AS: 184,223,239  
 2223 ovine enterovirus V: 75,76,80,88,89,95  
 2224 feline picornavirus  
 2225 bee paralysis virus

2230 Rhinovirus

- 2231 equine rhinovirus V: 1,3,30,34,40,55,80,81,89,116 AS: 40,131  
 2232 bovine rhinovirus V: 1,3,30,34,80,81,89  
 2233 foot and mouth disease virus V: 80,119,223 AS: 80  
 2234 human rhinovirus V: 1,5,30,55,80,81,89 AS: 226  
 2240 human hepatitis A virus V: 1,55,99,111,185,186,187,188  
AS: 189,190

## 2300 POXVIRIDAE

2310 Orthopoxvirus

- 2311 vaccinia virus V: 1,3,30,86,96,191,192 AS: 48,191,259  
 2312 variola virus V: 1  
 2313 alastrim virus V: 1  
 2314 cowpox virus V: 1,3,30,80,96,235  
 2315 ectromelia virus V: 82,90,131  
 2316 rabbitpox virus V: 90

- 2317 monkeypox virus V: 1,224 AS: 224  
 2318 buffalopox virus  
 2319 camelpox virus  
 2320 elephantenpox virus V: 3,96,131
- 2330 Avipoxvirus
- 2331 fowlpox virus V: 1,3,96,131  
 2332 pigeonpox virus V: 3,131  
 2333 turkeypox virus V: 131  
 2334 canarypox virus V: 1,96,131  
 2335 quailpox virus  
 2336 lovebirdpox virus  
 2337 sparrowpox virus  
 2338 starlingpox virus  
 2339 juncopox virus
- 2340 Capripoxvirus
- 2341 sheeppox virus V: 80,95,110,130 AS: 95,130  
 2342 goatpox virus V: 80,223  
 2343 lumpy skin disease virus V: 80,130,223 AS: 130
- 2350 Leporipoxvirus
- 2351 myxomavirus V: 1,82,103  
 2352 hare fibroma virus  
 2353 rabbit fibroma virus V: 1,82  
 2354 squirrel fibroma virus
- 2360 Parapoxvirus
- 2361 orf virus V: 88,130  
 2362 bovine papular stomatitis virus V: 1,3,80,88,95,130  
 2363 milker's nodule virus - pseudopox V: 1  
 2364 sealionpox virus
- 2380 Other poxviruses
- 2381 moluscum contagiosum virus  
 2382 swine pox virus V: 1,3,130  
 2383 simian poxvirus V: 1,224 AS: 224  
 2384 Yaba monkey tumor virus V: 1,82  
 2385 raccoonpox virus  
 2386 murine poxvirus  
 2387 rat poxvirus  
 2388 equine poxvirus  
 2389 feline poxvirus
- 2390 Entomopoxvirus
- 2391 Insect poxvirus group

2400 REOVIRIDAE2410 Reovirus

- 2411 reovirus type 1 V: 1,3,5,55,75,80,81,88,95,226,255 AS: 226  
 2412 reovirus type 2 V: 1,3,5,55,75,80,81,88,95,226,255 AS: 3,226  
 2413 reovirus type 3 V: 1,3,5,55,75,80,81,88,95,226,255 AS: 3,226  
 2414 avian reovirus V: 1,3,132  
 2415 canine reovirus  
 2416 porcine reovirus V: 3  
 2417 feline reovirus V: 1  
 2418 ovine reovirus

2430 Orbivirus

- 2431 blue tongue virus V: 1,55,79,80,214,239  
 2432 african horse sickness virus V: 51,79,80  
 2433 epizootic haemorrhagic disease of deer virus V: 1,55,80  
 2434 Colorado tick fever virus V: 1,79  
 2435 Ibaraki disease virus V: 80,223

2450 Rotavirus

- 2451 neonatal calf diarrhoea virus V: 1,3,94,95,227,244 AS: 94  
 2452 bovine rotavirus V: 1,3,75,80,88,89,262  
 2453 enzootic diarrhoea of infant mice virus  
 2454 swine rotavirus V: 1,75,80,88,89,95  
 2455 equine rotavirus V: 14,45,75,80,88,89  
 2456 rabbit rotavirus  
 2457 ovine rotavirus V: 75,80,88,89,95,193 AS: 193  
 2458 simian rotavirus V: 1,75,80,88,89,194,244  
 2459 chicken rotavirus  
 2460 human infantile diarrhoea virus V: 75,80,88,89,244  
 2461 murine rotavirus V: 75,80,88,89  
 2462 canine rotavirus V: 244  
 2463 feline rotavirus

2500 RETROVIRIDAEOncornavirinae2510 Mammalian oncornaviruses

- 2511 murine sarcoma and leukemia virus V: 1,86  
 2512 feline sarkoma and leukemia virus V: 1,33,133  
 2513 porcine oncornavirus  
 2514 bovine oncornavirus (leukemia virus)  
 2515 guinea pig oncornavirus  
 2516 rat oncornavirus  
 2517 monkey oncornavirus V: 1

2530 Avian oncornavirus

- 2531 chicken leukosis and sarcomavirus V: 1,82,102,245,257  
 2532 avian reticuloendotheliosis virus V: 1  
 2533 avian myelocytomatosis virus V: 1,79  
 2534 avian erythroblastosis virus V: 1,102

2540 Reptilian and amphibian oncornaviruses

2541 viper oncornavirus

2550 Fish oncornaviruses2560 Other oncornaviruses2561 mouse mammary tumor virus V: 1

2562 guinea pig mammary tumor virus

2563 MPMV primate virus

2564 possible members from primate cell cultures

2565 endogenous hamster virus

2570 SpumavirinaeFoamy virus group2571 bovine syncytial virus V: 12572 feline syncytial virus V: 1,86

2573 hamster syncytial virus

2574 human foamy agens

2575 simian foamy agens V: 1,224 AS: 2242580 Lentivirinae2581 sheep panleukoencephalitis virus (Maedi virus) V: 1,88,95,108,  
218,219,2202582 equine infectious anemia virus V: 1,73 AS: 217

2583 AIDS virus

2584 caprine arthritis encephalitis virus V: 234,252 AS: 234

## 2600 RHABDOVIRIDAE

2610 Lyssavirus2611 rabies virus V: 1,39,60,64,67,80,214,215,216,228,239,260,2612620 Vesiculovirus2621 vesicular stomatitis virus V: 1,3,60,78,80,81,86,2552622 bovine ephemeral fever virus V: 80,213 AS: 2132623 rhabdovirus carpic V: 204,211,212 AS: 204,211,2122624 viral haemorrhagic septicaemia virus V: 107,203,230 AS: 203,2302625 infectious hematopoietic necrosis virus V: 1 AS: 2102626 red disease of pike virus V: 204,230,231,232 AS: 230,2322627 rhabdovirus of eel V: 107,209 AS: 209

2628 rhabdovirus of grass carp

2630 Other rhabdoviruses2631 Marburg virus V: 79,207 AS: 208

- 2700 TOGAVIRIDAE V: 255
- 2710 Alphavirus V: 39
- 2711 eastern equine encephalitis virus V: 1,5,39,55  
2712 Venezuelan equine encephalitis virus V: 1,39,55  
2713 western equine encephalitis virus V: 1,5,39,55,255
- 2730 Flavivirus V: 39
- 2731 louping ill virus V: 1,79,88,90,95  
2732 Israel turkey meningoencephalitis virus  
2733 dengue virus V: 1,5,256  
2734 yellow fever virus V: 1,5,39
- 2750 Pestivirus
- 2751 bovine diarrhoea virus V: 1,3,76,80,88,89,96,96,119,206 AS: 59  
2752 hog cholera virus V: 3,6,8,76,80,101,205,223,246,265 AS: 8,101,  
205
- 2753 border disease virus - sheep V: 76,88,95  
2754 Borna disease virus
- 2761 equine arteritis virus V: 1,29,47,195  
2762 lactic dehydrogenase virus V: 1
- 2770 Rubivirus
- 2771 rubella virus V: 5,30,75,83,84,255 AS: 48,259
- 2800 BIRNAVIRIDAE
- 2811 infectious pancreatic necrosis of trout virus V: 1,107,203  
AS: 204
- 2821 infectious bursal disease virus V: 198,199,200,201,202  
2831 Drosophila X virus  
2832 Tellina virus  
2833 Eel virus
- 3000 UNGROUPED
- 3001 human hepatitis B virus V: 55,75  
3002 human hepatitis Non A-Non B virus V: 75  
3003 Borna disease virus V: 144  
3004 Runde virus V: 197  
3005 Bluegill virus V: 1,196  
3006 Blue wing disease virus  
3007 mouse thymic virus  
3008 scrapie agent (prion) V: 249  
3009 transmissible mink encephalopathy virus (prion)  
3010 turkey hepatitis virus  
3011 astrovirus of duck V: 1,100,104  
3012 astrovirus of lamb V: 95,88  
3013 astrovirus of calf V: 88  
3014 astrovirus of deer V: 88,95  
3015 astrovirus of man V: 88  
3016 Breda virus  
3017 Berne virus  
3018 Creutzfeld-Jacob disease (prion) V: 1,74  
3019 Kuru (prion) V: 1

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