

## RNA Virus Classification Table

RNA Virus Family	Genera or Subfamily	Example Species	Genetic material	Capsid	Envelope	Disease in Humans	Diseases in other Species
Arenaviridae	Antennavirus	WIFAV-1/2	(-)ssRNA (ambisense)	Helical	Enveloped	none identified	Infect frogfish
Arenaviridae	Hartmanivirus	HISV-1	(-)ssRNA (ambisense)	Helical	Enveloped	none identified	Infect snakes
Arenaviridae	Mammarenavirus	LASV, LCMV, LUJV	(-)ssRNA (ambisense)	Helical	Enveloped	Lassa, Lujo, Junin hemorrhagic fevers; lymphocytic choriomeningitis	Rodents, bats, primates, ticks
Arenaviridae	Reptarenavirus	Reptarenavirus	(-)ssRNA (ambisense)	Helical	Enveloped	none identified	Inclusion body disease in snakes; can infect mice
Arteriviridae	Arterivirus	EAV, PRRSV, SHFV	(+)ssRNA	Icosahedral	Enveloped	none identified	Equine arteritis; PRRSV; SHFV; wobbly possum disease
Astroviridae	Avastrovirus, Mamastrovirus	Astroviruses 1-3	(+)ssRNA	Icosahedral	Naked	Gastroenteritis in children and elderly	Gastroenteritis in birds, mammals
Birnaviridae	Aqua, Avibirna, Blosna, Entomobirnavirus	Infectious bursal disease	dsRNA	Icosahedral	Naked	none identified	Infectious pancreatic necrosis (fish); Infectious bursal disease (chickens), blotched snakehead, drosophila X
Bornaviridae	Orthobornavirus, Carbovirus	Borna virus disease	(-)ssRNA	Helical	Enveloped	none identified	Borna disease (fatal neurological disease in horses, sheep, birds); encephalitis & proventricular dilatation (birds)
Bunyaviridae	Orthobunyavirus	Akabane virus, La Crosse	(-)ssRNA	Helical	Enveloped	La Crosse viral encephalitis	Arthropod spread; congenital anomalies in cattle, sheep, goats
Bunyaviridae	Phlebovirus	Rift Valley fever	(-)ssRNA	Helical	Enveloped	Viral hemorrhagic fevers (Rift valley)	Arthropod and rodent transmitted hemorrhagic fever, renal failure, encephalitis, meningitis, blindness
Bunyaviridae	Nairovirus	Crimean-Congo fever, Nairobi sheep	(-)ssRNA	Helical	Enveloped	Viral hemorrhagic fevers (Crimean-Congo, Hantavirus)	Arthropod and rodent transmitted hemorrhagic fever, renal failure, encephalitis, meningitis, blindness
Bunyaviridae	Hantavirus	Hantavirus	(-)ssRNA	Helical	Enveloped	Viral hemorrhagic fevers ( Hantavirus), Hantavirus pulmonary syndrome	Arthropod and rodent transmitted hemorrhagic fever, respiratory distress syndrome
Bunyaviridae	Tospovirus	Tospo plant virus	(-)ssRNA	Helical	Enveloped	none identified	Tomato spotted wilt disease
Caliciviridae	Calicivirus	Norwalk virus	(+)ssRNA	Icosahedral	Naked	Norovirus gastroenteritis	Rabbit hemorrhagic disease, vesicular exanthem of swine, feline calicivirus
Coronaviridae	Coronavirinae	Alphacoronavirus	(+)ssRNA	Helical	Enveloped	Human Coronavirus 229E; NL63 (upper respiratory infection)	Bat derived, also found in mink, ferret, pigs; canine and feline coronavirus
Coronaviridae	Coronavirinae	Betacoronavirus	(+)ssRNA	Helical	Enveloped	SARS-CoV2; SARS; MERS; Human Coronavirus OC43 and HKU1	Bat derived; causes disease in humans, camels, rodents, cows, hedgehogs, rabbits, mouse hepatitis
Coronaviridae	Coronavirinae	Gammacoronavirus	(+)ssRNA	Helical	Enveloped	not identified	Infectious bronchitis in poultry; avian and pig respiratory and enteric disease; avian infectious bronchitis; also infects geese, beluga whales, ducks
Coronaviridae	Coronavirinae	Deltacoronavirus	(+)ssRNA	Helical	Enveloped	not identified	Avian disease; Bubul coronavirus HKU11; Night heron coronavirus, Wigeon coronavirus, Munia
Coronaviridae	Torovirinae	Torovirus	(+)ssRNA	Helical	Enveloped	Gastroenteritis in immunocompromised and pediatric population	Gastroenteritis in cattle, pigs, horses
Hepadnavirus	Hepatitis Delta	Hepatitis Delta	(-)ssRNA	Icosahedral	Enveloped	Hepatitis B satellite virus hepatitis; cirrhosis; liver cancer	not identified
Filoviridae	Ebolavirus	Bombali, Bundibugyo, Reston, Sudan, Tai Forest, Zaire	(-)ssRNA	Helical	Enveloped	Ebola hemorrhagic fever	Hemorrhagic fevers in bats, pigs, primates
Filoviridae	Marburgvirus	Marburg, Ravn	(-)ssRNA	Helical	Enveloped	Marburg hemorrhagic fever	Hemorrhagic fevers in bats, pigs, primates
Filoviridae	Cuevavirus	Lloviu virus	(-)ssRNA	Helical	Enveloped	none identified	Pneumonia in bats
Filoviridae	Dianlovirus	Mengla virus	(-)ssRNA	Helical	Enveloped	none identified	Found in bats in Mangala, Yunnan, China
Filoviridae	Striavirus, Thamnovirus	Striavirus; Huangjiao virus	(-)ssRNA	Helical	Enveloped	none identified	Infects fish
Flaviviridae	Flavivirus	Yellow fever, West Nile, Dengue, Zika virus	(+)ssRNA	Icosahedral	Enveloped	Dengue fever, Zika; Hepatitis C, Encephalitis (Japanese, Yellow fever, St. Louis, Tick-borne, West Nile)	Arthropod-transmitted encephalitis and hemorrhagic disease in mammals; bovine viral diarrhea, swine fever

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Flaviviridae	Hepacivirus	Hepatitis C virus	(+)ssRNA	Icosahedral	Enveloped	Hepatitis C; Hepatocellular carcinoma	Sexual, blood borne transmission
Flaviviridae	Pegivirus	Pegivirus A	(+)ssRNA	Icosahedral	Enveloped	none identified	Sexual, blood borne transmission
Flaviviridae	Pestivirus	Bovine diarrhea virus 1; classical swine fever virus	(+)ssRNA	Icosahedral	Enveloped	none identified	Hemorrhagic syndrome, abortion, fatal mucosal disease; parenteral transmission
Hepeviridae	Orthohepevirus A-D	Hepatitis E virus	(+)ssRNA	Icosahedral	Naked	Hepatitis E gastroenteritis	Hepatitis, liver failure and gastroenteritis in pigs, deer, rabbits, camels, bats, mongoose
Hepeviridae	Piscihepevirus	Piscihepevirus A	(+)ssRNA	Icosahedral	Naked	none identified	Cutthroat trout virus
Orthomyxoviridae	Influenzavirus Alpha-Gamma	Influenzavirus A, Influenzavirus B, Swine and Equine	(-)ssRNA	Helical	Enveloped	Influenza A, B, C, D; Spanish flu, Swine Flu, Bird Flu, Asian Flu	Influenza in humans, birds, mammals, salmon anemia, ticks, mosquitoes, birds, and arthropods
Orthomyxoviridae	Isavirus	Infectious salmon anemia virus	(-)ssRNA	Helical	Enveloped	none identified	Anemia in fish, salmon
Orthomyxoviridae	Thogotovirus	Dhori, Bourbon virus, Thogotovirus	(-)ssRNA	Helical	Enveloped	Fever, encephalitis	Encephalitis; arthropod (tick) borne
Orthomyxoviridae	Quarantavirus	Quarantavirus; Johnson Atoll virus	(-)ssRNA	Helical	Enveloped	Mild fever	Tick and insect borne fatal diarrhea in birds
Paramyxoviridae	Avulavirinae	Avian paramyxovirus 1-21; Newcastle disease virus	(-)ssRNA	Helical	Enveloped	none identified	Newcastle disease: avian respiratory and diarrhea disease
Paramyxoviridae	Morbillivirus, Rubulavirus, Henipavirus	Mumps, Measles, Hendra, Nipah virus	(-)ssRNA	Helical	Enveloped	Measles (rubella); mumps; RSV; parainfluenza; Nipah; Hendra	Canine distemper; cetacean morbillivirus, rinderpest in cattle
Picobirnaviridae	Picobirnavirus	Human, equine, Beihai picobirnavirus	dsRNA	Icosahedral	Naked	Gastroenteritis	Gastroenteritis in humans, rabbits, fruit bats
Picornaviridae	Enterovirus	Poliovirus 1	(+)ssRNA	Icosahedral	Naked	Poliomyelitis	Encephalomyelitis, respiratory infections, hepatitis in mammals and vertebrates
Picornaviridae	Rhinovirus A-C	Rhinovirus 1A	(+)ssRNA	Icosahedral	Naked	Rhinovirus (common cold)	Upper respiratory infection in humans, chimpanzees, and gibbons
Picornaviridae	Hepatovirus	Hepatitis A virus	(+)ssRNA	Icosahedral	Naked	Hepatitis A	Hepatitis in vertebrates with fecal-oral and blood transmission
Picornaviridae	Aphthovirus	Foot-and mouth disease	(+)ssRNA	Icosahedral	Naked	Foot-and mouth disease	Pneumonias in cattle, birds, rodents
Pneumoviridae	Metapneumovirus, orthopneumovirus	Human respiratory syncytial virus, bovine RSV, AMPV, MPV	(-)ssRNA	Helical	Enveloped	Viral pneumonia (upper respiratory) in children	Respiratory infections in cattle, rodents, birds
Reoviridae	Spinareovirinae	Aquareo, Fijivirus, Coltivirus, Orthoreo, Oryza; Mycoreo, etc.	dsRNA	Icosahedral	Naked	Orthoreovirus coeliac disease; plants infected by insect vectors	Vertebrate mucosal gut infection, plants phloem; wide host range, vertebrates, plants, protists, fungi
Reoviridae	Sedoreovirinae	Rotavirus, Orbivirus, Mimoreovirus, Cardoreovirus, Phytoreovirus, Seadornavirus	dsRNA	Icosahedral	Naked	Rotavirus diarrhea; respiratory infections; encephalitis	Vertebrates gastroenteritis, respiratory illness, myalgias; wide host range, vertebrates, plants, protists, fungi
Retroviridae	Orthoretrovirinae	Alpharetrovirus	(+)ssRNA	Complex	Enveloped	RSV	Rous sarcoma virus; acutely oncogenic in birds
Retroviridae	Orthoretrovirinae	Betaretrovirus	(+)ssRNA	Complex	Enveloped	MMTV; MPMV; JSRV	Mouse mammary tumors; oncogenic in rodents, sheep
Retroviridae	Orthoretrovirinae	Gammaretrovirus	(+)ssRNA	Complex	Enveloped	MuLV, GALV, FELV	Murine and feline leukemia; oncogenic
Retroviridae	Orthoretrovirinae	Deltaretrovirus	(+)ssRNA	Complex	Enveloped	HTLV-1; HTLV-2; ATL; BLV	T cell leukemias; oncogenic; tropical spastic paraparesis and myopathy
Retroviridae	Orthoretrovirinae	Epsilonretrovirus	(+)ssRNA	Complex	Enveloped	WEHV-1, WEHV-2; PHC; WDSV	Walleye (fish) proliferative lesions
Retroviridae	Orthoretrovirinae	Spumavirus	(+)ssRNA	Complex	Enveloped	HFV; BFV	Zoonotic infection "foamy" virus in primates, cats, cows; infects humans but uncertain if it causes disease
Retroviridae	Orthoretrovirinae	Lentivirus	(+)ssRNA	Complex	Enveloped	HIV-1; HIV-2; FIV ; EIAV; Visna; SIV	AIDS; Simian and Feline immunodeficiency
Rhabdoviridae	Mononegavirales	Rabies virus, Vesicular stomatitis; Infectious hematopoietic necrosis	(-)ssRNA	Helical	Enveloped	Rabies encephalitis; vesicular stomatitis	Arthropod transmission; encephalitis; hemorrhagic fever in mammals, fish, plants, birds, cattle, rodents, drosophila
Togaviridae	Alphavirus	Eastern and Western equine encephalitis; Chikungunya; Sindbis virus; Semliki forest virus	(+)ssRNA	Icosahedral	Enveloped	Encephalitis, arthralgias, myopathies	Arthropod (mosquito) transmission; encephalitis, fever, arthralgias; infects mammals, marsupials, birds, fish
Togaviridae	Rubivirus	Rubella	(+)ssRNA	Spherical	Enveloped	Rubella (German measles); congenital rubella syndrome	Respiratory transmission; rash, encephalitis and arthralgias in birds, horses, primates, rodents