

DNA Virus Classification Table

DNA Virus Family	Genera (Subfamily)	Typical Species	Genetic material	Capsid	Envelope	Disease in Humans	Diseases in other Species
Adenoviridae	Mastadenovirus	Adenoviruses 1-47	dsDNA	Icosahedral	Naked	Respiratory illness; conjunctivitis, gastroenteritis, tonsillitis, meningitis, cystitis	Canine hepatitis, respiratory illness in horses, cattle, pigs, sheep, goats, sea lions, birds dogs, squirrel enteritis
Anelloviridae	Torqueviruses	Alpha-Zeta Torqueviruses	(-)ssDNA	Icosahedral	Naked	Hepatitis, lupus, pulmonary, myopathy, multiple sclerosis; 90% of humans infected worldwide	Chimpanzee, pig, cow, sheep, tree shrews, pigs, cats, sea lions and chickens
Asfarviridae	Asfivirus	African Swine fever virus	dsDNA	Icosahedral	Enveloped	African swine fever	Arthropod (tick) transmission or ingestion; hemorrhagic fever in warthogs, pigs
Baculoviridae	Baculovirus	Alpha-Gamma Baculoviruses	dsDNA	Stick shaped	Occluded or Enveloped	none identified	Arthropods, Lepidoptera, crustaceans
Circoviridae	Circovirus	Porcine circovirus 1	ssDNA	Icosahedral	Naked	none identified	Birds, pigs, dogs; bats; rodents; causes post-weaning multisystem wasting syndrome, chicken anemia
Circoviridae	Cyclovirus	Human cyclovirus 1	ssDNA	Icosahedral	Naked	Cyclovirus Vietnam encephalitis	Encephalitis; infects multiple species including birds, mammals, insects
Hepadnaviridae	Orthohepadnavirus	Hepatitis B virus	partially ssDNA	Icosahedral	Enveloped	Hepatitis B virus; Cirrhosis, Hepatocellular carcinoma	Hepatitis in ducks, squirrels, primates, herons
Herpesviridae	Alphaherpesvirinae	HSV-1, HSV-2	dsDNA	Icosahedral	Enveloped	HSV-1, HSV-2	Herpetic lesions in mammals, birds, fish, reptiles, amphibians, mollusks
Herpesviridae	Varicellavirus	Varicella-zoster	dsDNA	Icosahedral	Enveloped	Varicella (chicken pox), shingles	Herpetic lesions in mammals, birds, fish, reptiles, amphibians, mollusks
Herpesviridae	Gammaherpesvirinae	Epstein-Barr virus	dsDNA	Icosahedral	Enveloped	Infectious mononucleosis, B-cell lymphoma	Herpetic lesions in mammals, birds, fish, reptiles, amphibians, mollusks
Herpesviridae	Betaherpesvirinae	Cytomegalovirus	dsDNA	Icosahedral	Enveloped	CMV pneumonia in immunocompromised	Herpetic lesions in mammals, birds, fish, reptiles, amphibians, mollusks
Herpesviridae	Betaherpes-Roseolovirus	HHV-6	dsDNA	Icosahedral	Enveloped	Infantile roseola (exanthema subitum); neurovirulent; can cause encephalitis	Can infect primates
Herpesviridae	Betaherpes-Roseolovirus	HHV-7	dsDNA	Icosahedral	Enveloped	Infantile roseola; infects CD4+ T cells and salivary glands	Can infect primates
Herpesviridae	Gammaherpesvirinae	HHV-8	dsDNA	Icosahedral	Enveloped	Kaposi's sarcoma; Castleman's disease; primary effusion lymphoma, KSHV inflammatory cytokine syndrome	none identified
Polyomaviridae	Polyomavirus	JC and BK, SV40	dsDNA	Icosahedral	Naked	PML; BK nephropathy; Merkel cell cancer; respiratory infection	Budgerigar fledgling disease; mammals and birds; SV40 primates; cancer
Papillomaviridae	Papillomavirus	More than 60 types	dsDNA	Icosahedral	Naked	Papillomas (HPVs); Cervical warts and cancer; infects keratinocytes and squamous	Papillomas and sarcomas in chickens, papillomas in vertebrates
Parvoviridae	Erythrovirus	B19	ssDNA	Icosahedral	Naked	Fifth disease; Erythema infectiosum, Sickle cell aplastic anemia	Distemper in cats and dogs; gastroenteritis in mammals and birds
Parvoviridae	Dependovirus	AAV2	ssDNA	Icosahedral	Naked	Helper Adenovirus infections	Distemper in cats and dogs; gastroenteritis in mammals and birds
Poxviridae	Orthopoxvirus	Vaccinia	dsDNA	ovoid, brick-shaped	Enveloped	Smallpox; Vaccinia; cowpox; monkeypox	Cowpox; bovine papular stomatitis; swine pox; yaba monkey tumor virus; rabbit fibroma
Poxviridae	Parapoxvirus	Orf virus	dsDNA	ovoid, brick-shaped	Enveloped	Orf; milker's node disease	Orf; bovine pustular stomatitis
Poxviridae	Molluscipoxvirus	Molluscum contagiosum virus	dsDNA	ovoid, brick-shaped	Enveloped	Molluscum contagiosum	Cowpox; bovine papular stomatitis; swine pox; yaba monkey tumor virus; rabbit fibroma

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Bacteriophages	Various	Various	dsDNA, ssDNA, ssRNA	various	various	Diphtheria, botulism, cholera, scarlet fever, hemolysis, Shiga staph aureus food poisoning, toxin producing Shigella, E coli, pseudomonas	Infects bacteria and archaea to produce toxins