

**Table 19.1** Classes of Animal Viruses

Class/Family	Envelope	Examples That Cause Human Diseases
<b>I. Double-Stranded DNA (dsDNA)</b>		
Adenovirus (see Figure 19.3b)	No	Respiratory viruses; tumor-causing viruses
Papovavirus	No	Papillomavirus (warts, cervical cancer); polyomavirus (tumors)
Herpesvirus	Yes	Herpes simplex I and II (cold sores, genital sores); varicella zoster (shingles, chicken pox); Epstein-Barr virus (mononucleosis, Burkitt's lymphoma)
Poxvirus	Yes	Smallpox virus; cowpox virus
<b>II. Single-Stranded DNA (ssDNA)</b>		
Parvovirus	No	B19 parvovirus (mild rash)
<b>III. Double-Stranded RNA (dsRNA)</b>		
Reovirus	No	Rotavirus (diarrhea); Colorado tick fever virus
<b>IV. Single-Stranded RNA (ssRNA); Serves as mRNA</b>		
Picornavirus	No	Rhinovirus (common cold); poliovirus; hepatitis A virus; other enteric (intestinal) viruses
Coronavirus	Yes	Severe acute respiratory syndrome (SARS)
Flavivirus	Yes	Yellow fever virus; West Nile virus; hepatitis C virus
Togavirus	Yes	Rubella virus; equine encephalitis viruses
<b>V. ssRNA; Template for mRNA Synthesis</b>		
Filovirus	Yes	Ebola virus (hemorrhagic fever)
Orthomyxovirus (see Figures 19.3c and 19.9a)	Yes	Influenza virus
Paramyxovirus	Yes	Measles virus; mumps virus
Rhabdovirus	Yes	Rabies virus
<b>VI. ssRNA; Template for DNA Synthesis</b>		
Retrovirus (see Figure 19.8)	Yes	Human immunodeficiency virus (HIV/AIDS); RNA tumor viruses (leukemia)