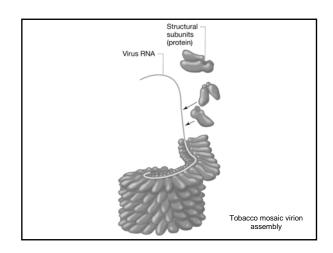
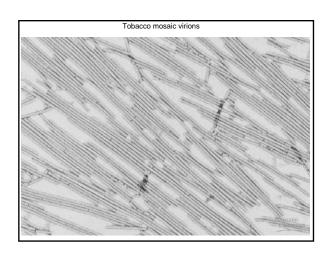
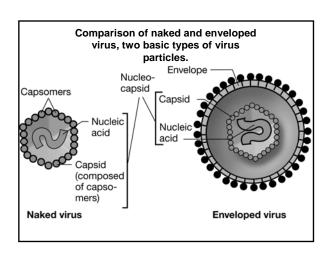


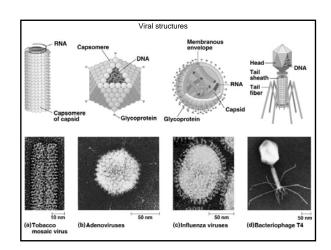
Viral genomes. The genomes of viruses can be composed of either DNA or RNA, and some use both as their genomic material at different stages in their life cycle. However, only **one** type of nucleic acid is found in the virion of any particular type of virus.

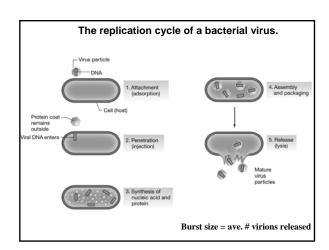
Table		es of Animal Viruses, Grouped pe of Nucleic Acid	
Class*		Examples/Diseases	
I. ds	DNA**		
Per	povavirus	Papilloma (human warts, cervical cancer); polyoma (tumors in certain animals)	
Ad	Senovirus	Respiratory diseases; some cause tumors in certain animals	
He	erpessions	Herpes simples I (cold sores), herpes simples II (genital sores); sariorlla zoster (chicken pox, shingles); Epotein-Barr virus (mechenseleosis, Burkitt's lymphoma)	
Po	nevirus	Smallpox; vaccinia, cowpox	
II. sst	DNA		
Par	evovirus	Roseola; most parvoviruses depend on co- infection with adenoviruses for growth	
III. ds	RNA		
Re	ovirus	Diarrhea; mild respiratory diseases	
IV. ssi	RNA that can	serve as mRNA	
Pic	cornavirus	Poliovirus; rhinovirus (common cold); enteric (intestinal) viruses	
To	gavirus	Rubella virus; yellow fever virus; encephalitis viruses	
V. ssi	RNA that is a	template for mRNA	
Rh	tabdovirus	Rabies	
Per	ramysovirus	Meades; mumps	
Or	rthomysovirus	Influenza viruses	
VI.ssRNA that is a		template for DNA synthesis	
Re	trovirus	RNA tumor viruses (e.g., leukemia viruses); HIV (AIDS virus)	
province	or or absence of a r	to class differ mainly in capsid structure and in the membraness emologe. — single-stranded.	

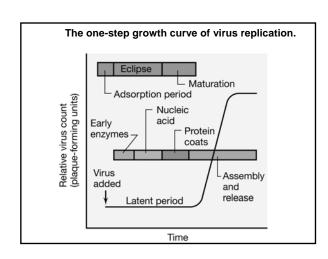


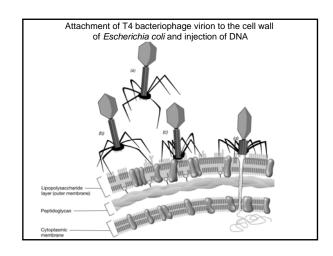


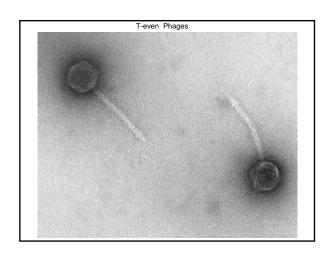


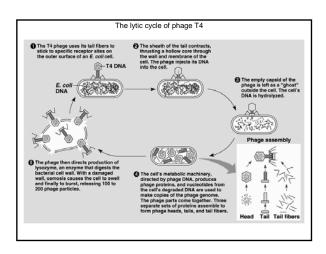


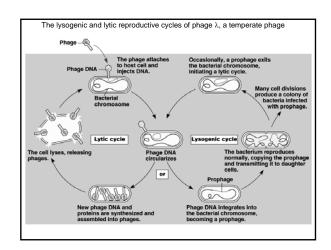


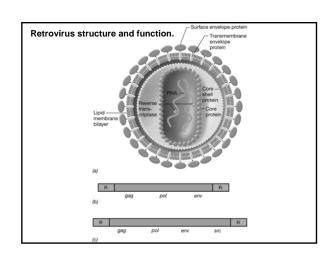


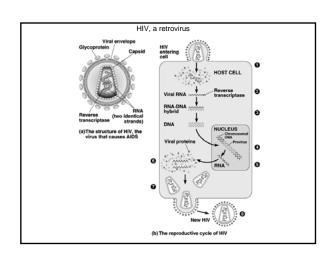












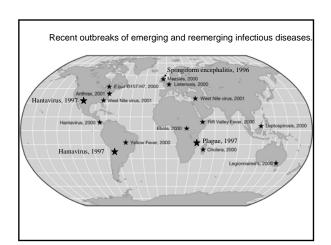
Structure of **viroids**, showing how single-stranded circular RNA can form a seemingly double-stranded structure by intrastrand base-pairing.



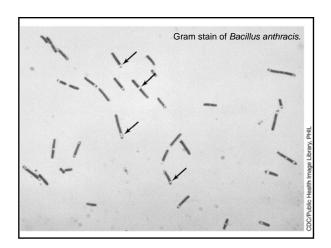
Hold-overs from an RNA world???

A hypothesis to explain how prions propagate

Prion
Original prion
New prion
Many prions



Emerging viruses Ebola virus: SS RNA Hantavirus: SS RNA



ble 30.1 Major bacterial diseases of humans, sources of infection, and potential control (Part 1)		
Disease	Primary Reservoir	Potential Means for Control
Human Contact and Respiratorily Contracted		
Streptococcal infections	Humans	Antibiotics; vaccine for pneumonia
Staphylococcal infections	Humans	Antibiotics; antiseptics
Meningitis	Humans	Specific antibiotics
Tuberculosis	Humans	Test and treat infected persons
Whooping cough	Humans	Vaccinate infants
Diphtheria	Humans	Vaccinate infants
Leprosy	Humans	Obtain proper treatment; vaccinate in endemic areas
Pneumonic plague	Humans	Eliminate rats and fleas

Major bacterial diseases of humans, sources of infection, and potential control (Part 2)			
Disease	Primary Reservoir	Potential Means for Control	
Water-, Food-, and Soil-borne			
Cholera	Humans	Treat sewage and water; observe proper sanitation	
Typhoid fever	Humans	Pasteurize milk; proper treatment of sewage; inspect food handlers	
Shigellosis (dysentery)	Humans	Observe proper sanitation	
Salmonellosis	Beef, poultry	Cook meat and eggs properly	
Campylobacter	Animals, poultry	Pasteurize milk; thorough cooking of food and water	
Tetanus	Soil	Vaccinate	
Brucellosis	Cattle	Immunize cattle and pasteurize milk	
Botulism	Soil	Properly can and cook food	
Staph food poisoning	Humans	Refrigerate food	
Legionnaire's disease	Aquatic environments	Clean misting equipment or do not use	
Pseudomonas infections	Dust	Clean air in burn wards	

able 30.1 Major bacterial diseases of humans, sources of infection, and potential control (Part 3)				
Disease	Primary Reservoir	Potential Means for Control		
Sexually Transmitted				
Gonorrhea	Humans	Eliminate carriers; practice safe sex		
Syphilis	Humans	Eliminate carriers; practice safe sex		
Ćhlamydia	Humans	Eliminate carriers; practice safe sex		
Herpes Simplex Virus	Humans	Same		
Louse-borne, Human to Human				
Trench fever	Humans	Proper sanitation; control lice		
Relapsing fever	Humans	Control ticks and lice		
Typhus (epidemic)	Humans	Proper sanitation; vaccinate		

able 30.1 Major bacterial diseases of humans, sources of infection, and potential control (Part 4)		
Disease	Primary Reservoir	Potential Means for Control
Vector-borne		
Rocky Mountain spotted fever	Mammals, birds	Wear protective clothing and examine body for ticks
Tularemia	Rodents, rabbits	Observe proper care when cleaning wild rabbits
Lyme disease	Deer	Wear protective clothing
Bubonic plague	Rats	Control rats, proper sanitation
Typhus (endemic)	Rodents	Control rats, vaccinate
Scrub typhus	Mites	Control mites
Animal Contact		
Leptospira	Vertebrates	Control rodents, vaccinate domestic animals
Anthrax	Soil	Sterilize wool, hair, other animal products
Psittacosis	Birds	Control bird imports
O fever	Cattle	Vaccinate animal handlers

The recommended immunization schedule for infants and young children in the United States		
Age	Vaccine Employed	
Birth	Hepatitis B	
2 months	Diphtheria; pertussis; tetanus (DPT) Hemophilus B (Hib)	
	Poliomyelitis (OPV)	
4 months	DPT; OPV; Hib	
	Hepatitis B	
6 months	Hepatitis B	
	DPT; OPV; Hib	
12–15 months	DPT; Hib; chicken pox, measles, mumps, rubella (MMR)	
1–6 years	OPV; DTP; MMR	