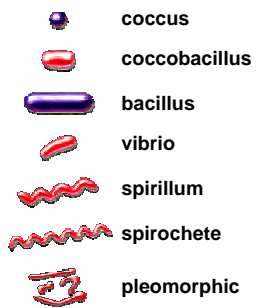


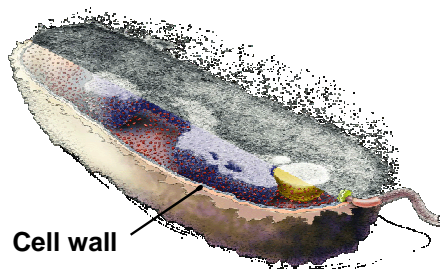
Prokaryotic Cells



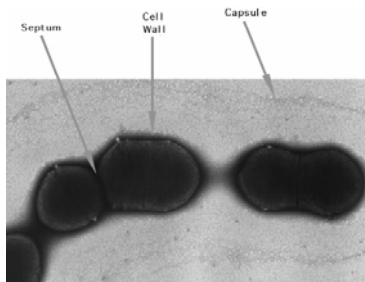
Bacterial Shapes



Bacterial Cell Anatomy: Cell Wall



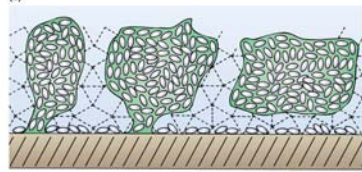
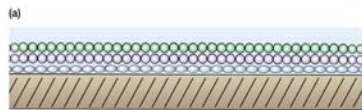
Bacterial Cell Anatomy: Glycocalyx



Electron micrograph of *Streptococcus pyogenes* by Maria Fazio and Vincent A. Fischetti, Ph.D. The Laboratory of Bacterial Pathogenesis and Immunology, Rockefeller University.

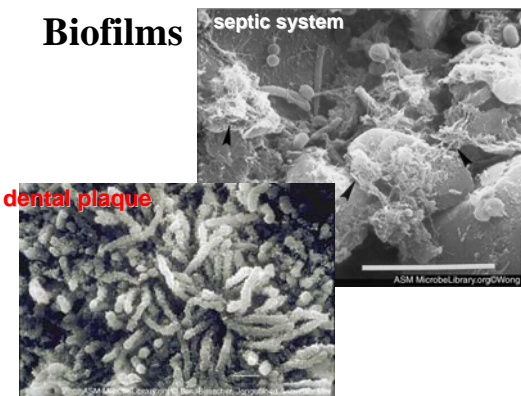
Biofilms

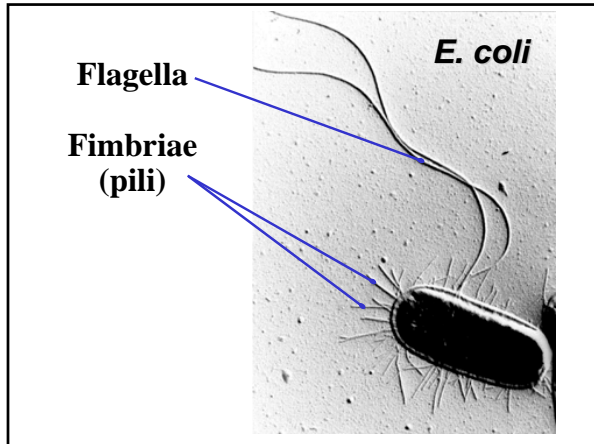
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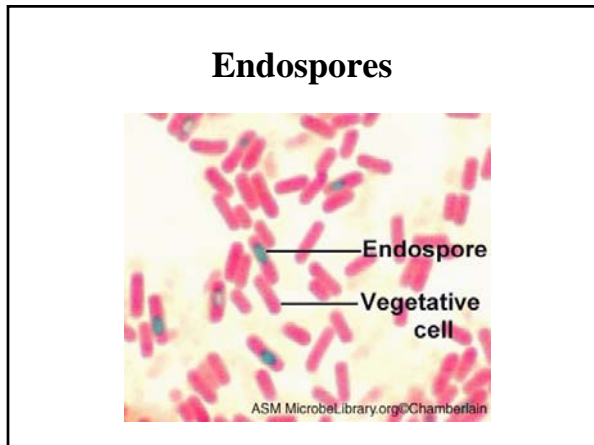


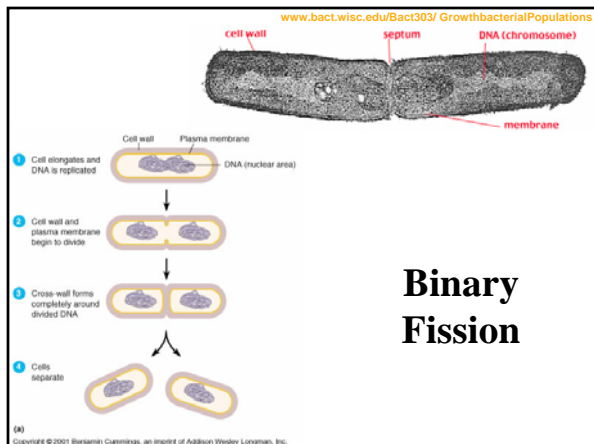
(c)

Biofilms

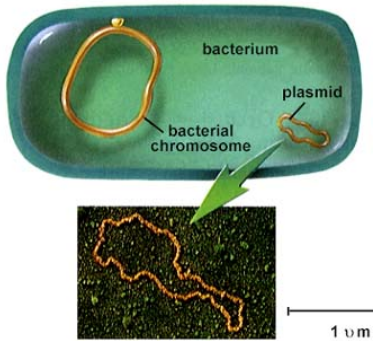




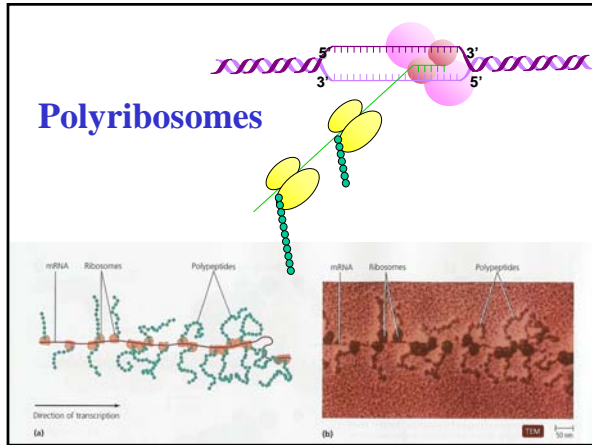




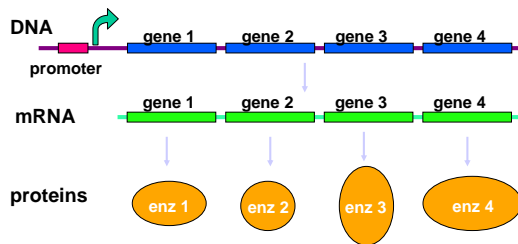
“Other” DNA: Plasmids

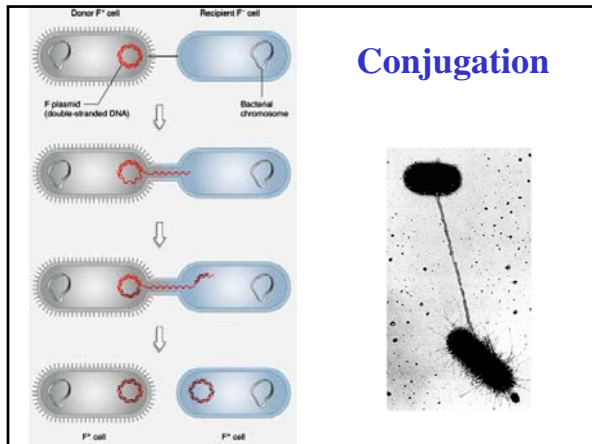


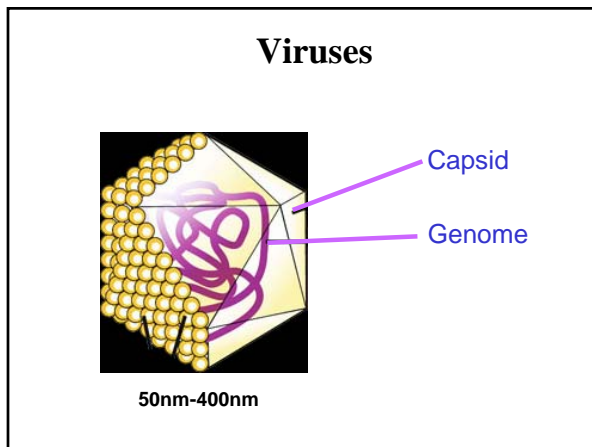
Polyribosomes

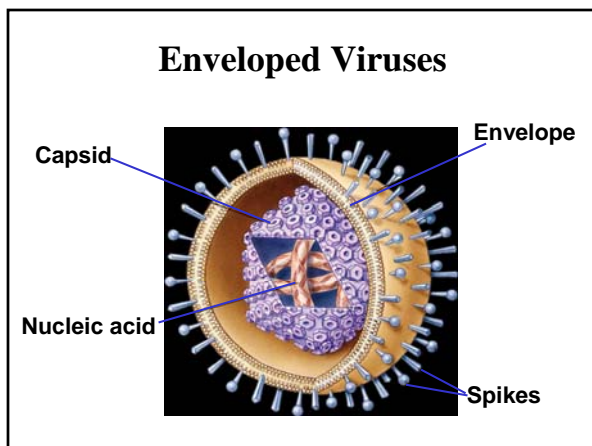


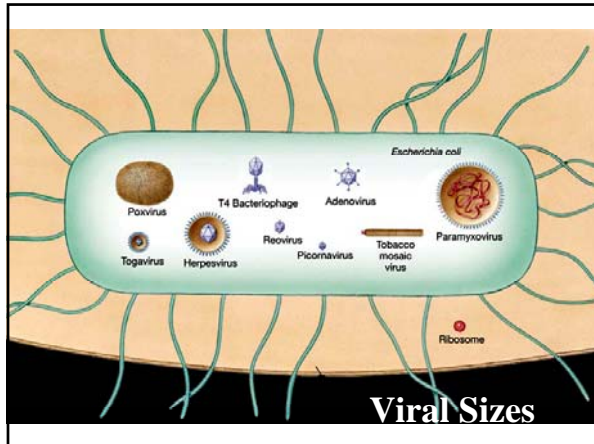
Prokaryotic Gene Organization: Operons





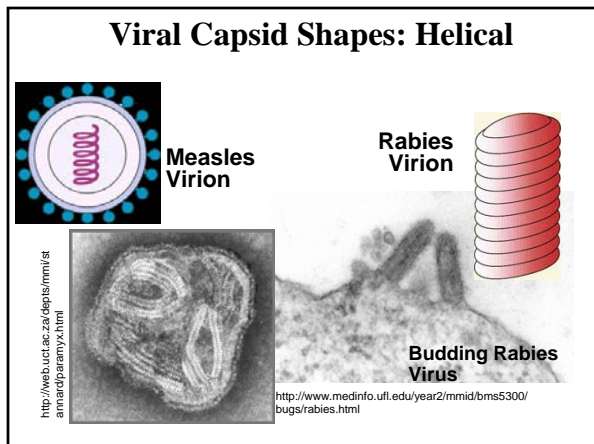






Viral Classification

<u>Genome Structure</u>	<u>Capsid Structure</u>
dsDNA	Icosahedral
ssDNA	Helical
dsRNA	<u>Enveloped vs. Naked</u>
ssRNA	

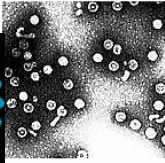


Viral Capsid Shapes: Icosahedral

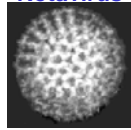
Herpes Simplex Virus



<http://www.hepb.org/info.html>



Rotavirus



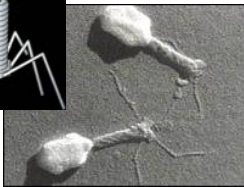
<http://www.cdc.gov/nczod/diseases/zoonotic/diseases/rotavirus/perfectSheets/rotavirus.htm>

Poliovirus

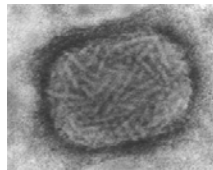


Complex Viruses

Bacteriophages



<http://www.exn.ca/news/images/20000921-virus.jpg>



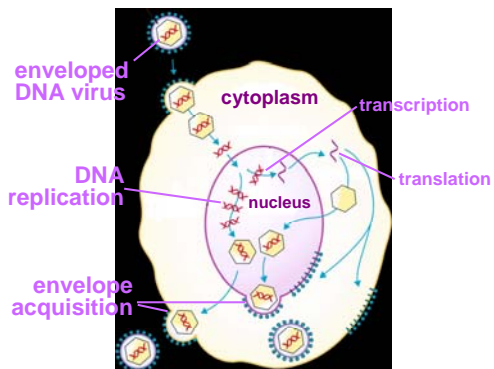
Pox Virus



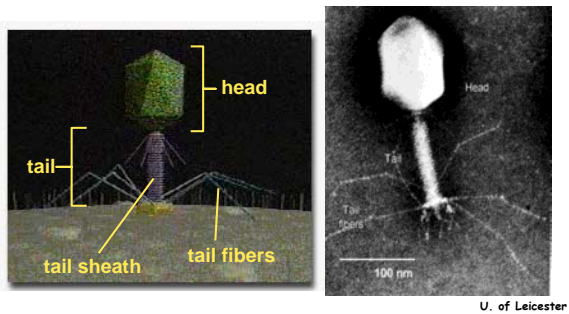
Viral Replication Cycle

1. Recognition & Entry
2. Gene Expression & Genome Replication
3. Capsid formation & Virion assembly

DNA Animal Virus Replication



T4 Bacteriophage



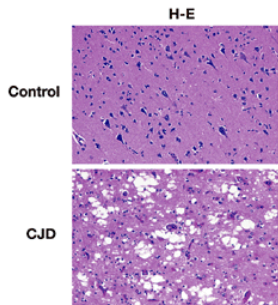
Exit of virus from cell



Mad Cow Disease



Creutzfeldt-Jacob disease



• a “spongiform encephalopathy”

- Scrapie
- BSE
- Kuru

Mechanisms of prion pathogenesis