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- Small pox (cows)
- Influenza (pigs/ducks)
- Measles (cows “rinderpest”)
- Tuberculosis (cow “mycobacterium bovis”)
- Syphilis (sheep)

Escherichia coli is a gram negative bacterium, whereas Bacillus subtilis is a gram positive bacterium. Describe the structural differences of their cell walls and their staining behavior with crystal violet.

- • Gram positive bacteria possess a cell membrane and a thick outer layer of peptidoglycan (polymer consisting of sugars and amino acids) (they stain with crystal violet)
- • Gram negative bacteria have a cell membrane and an additional outer lipid membrane and in between a thin layer of peptidoglycan (they do not stain with crystal violet)

What is a virus?

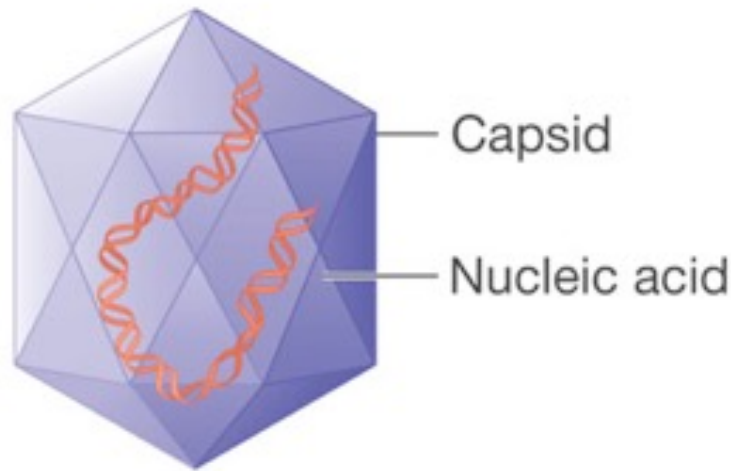
- define

Virus

Definition

- Small infectious agent (generally 10-100 nm in diameter)
- With a nucleic acid genome (DNA/RNA)
- Transmitted in a protein coat (Capsid)
- Covered (or not) with a membrane (Envelope)
- Depends on a host cell for replication

Where does the viral membrane/envelope come from?



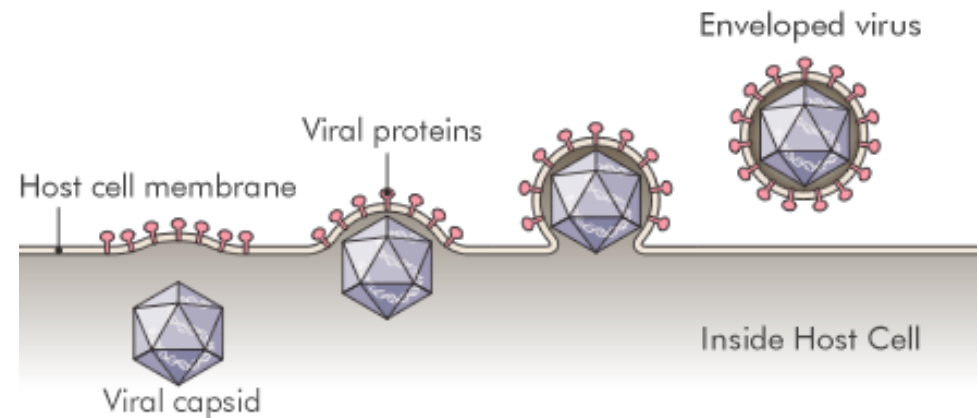
Naked (not enveloped) virus

Examples:

Poliovirus

Adenovirus

Hepatitis A



Enveloped virus

Examples:

Influenza

Hepatitis C,

HIV,

Measles virus