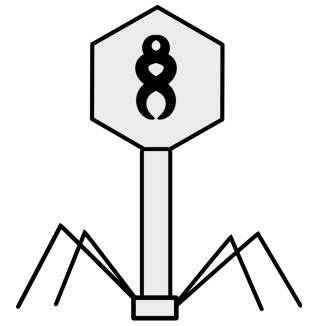


Viruses

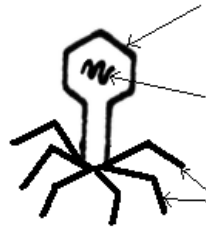
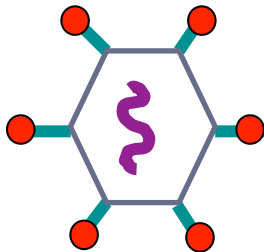


- Viruses are _____ considered to be living organisms because:
 - not made up of _____
 - only capable of 1 _____ function
 - i.e. _____ & only within a living cell

Virus: Microscopic biological _____ that causes _____; composed of a _____ that surrounds _____ material

Capsid: _____ coat of a virus that is composed of repeating _____ molecules

- Even though viruses are _____, microbiologists study them because
 - i) Cause disease by _____ other organisms
 - ii) very _____ size



Viruses are classified by:

- 1) _____
 - host range (types of cells that the virus can infect)
 - a) cold virus (human respiratory cells)
 - b) rabies (nerve cells in dogs)
 - c) HIV (human white blood cells)
 - d) bacteriophage (bacteria)
- 2) _____
 - size and shape of the capsid
 - type genetic material

Viral Size

- very small, measured in units called nanometres (nm)
- 1nm = 1×10^{-9} m (billionth of a metre)

Viral Replication

Lytic Cycle

- Step 1 – A&P: _____
 - Virus attaches to host and injects DNA
- Step 2 – _____
 - Viral DNA _____ cell to produce more virus parts
- Step 3 – _____
 - New virus parts _____ into new _____
- Step 4 – _____
 - New viruses released from _____ cells.

Lysogenic Cycle

- Virus goes _____ (sleep)
- Virus injects DNA, _____ take control of host.
- Cell reproduces normally, all daughter cells contain the _____.
- Host cell does not _____. At some point the virus can be triggered to re-enter lytic cycle (pregnancy, illness, stress)

Why are Viruses So Hard to Treat?

- 1) No _____ is available to kill viruses in the body
- 2) Some viruses are _____ - can remain dormant for years (hide inside cells) ex. a) Herpes Simplex Virus I (HSV I)
- 3) Some viruses can cause cells to become _____ (HPV)

