CONCEPT: ANIMAL VIRUSES: 5. RELEASE FROM HOST CELL

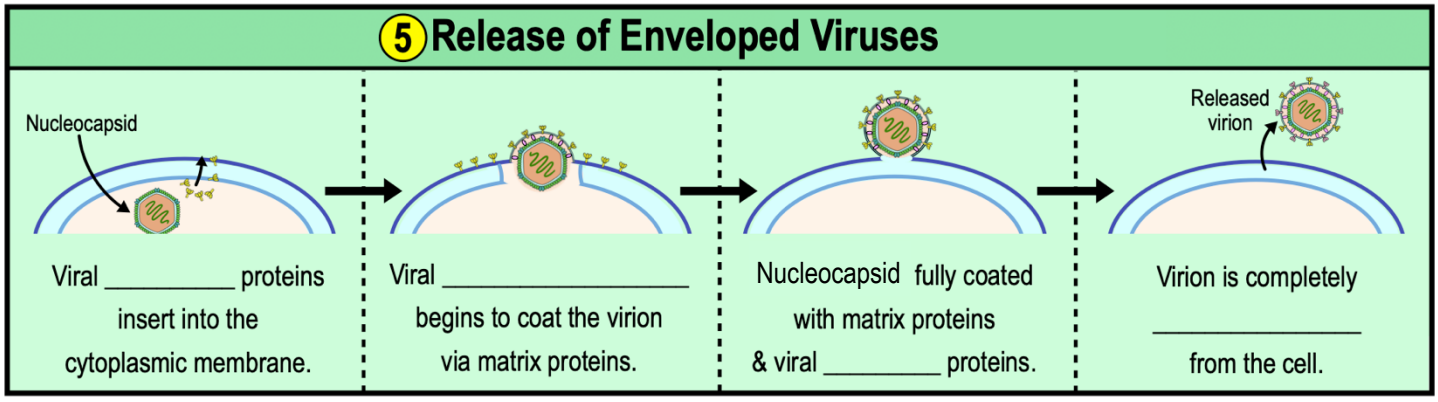
Release of Enveloped Viruses

●Most *enveloped* viruses are released by the process of _____.

□ **Budding:** *release* of enveloped virus using the cell's cytoplasmic membrane to form the _____.

□ Does _____ *immediately* kill the host cell.

EXAMPLE: Release of an enveloped animal virus from a host cell.



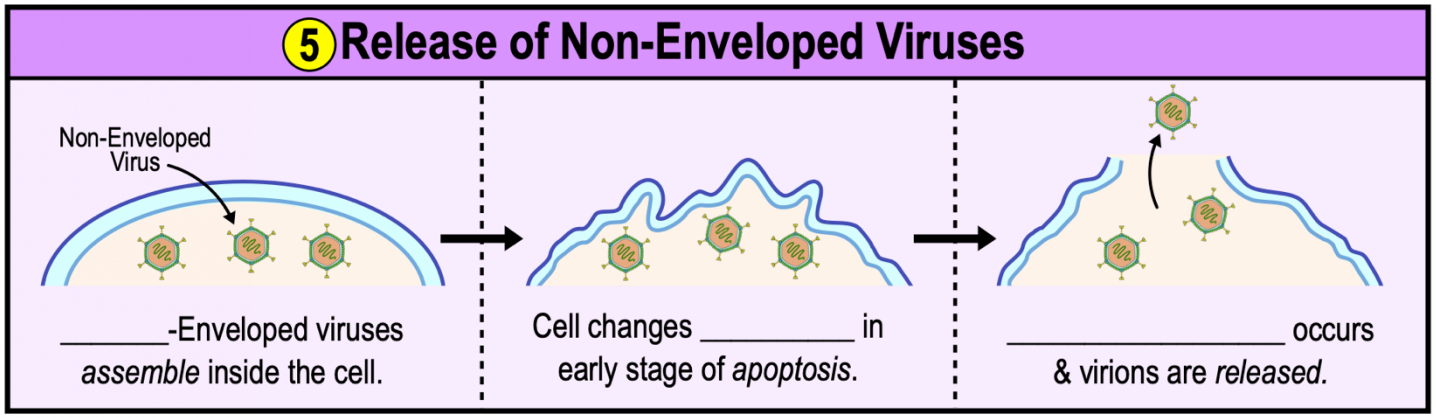
●Some envelopes develop from a cell's *organelle* (Ex. Golgi apparatus or Rough ER) rather than cytoplasmic membrane.

Release of Non-Enveloped Viruses

●Non-enveloped viruses are released from a host cell after it has died by triggering _____.

□ **Apoptosis:** mechanism of programmed cell _____ by a host cell during the immune response.

□ Once released from the cell, viral particles can infect healthy cells close by restarting the infection process.



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PRACTICE: Which of these answers is a major difference between the release of enveloped viruses and the release of non-enveloped viruses?

a) Enveloped viruses assemble after release while non-enveloped viruses assemble before release.
b) Enveloped viruses when released cause the host cell to burst while non-enveloped viruses do not.
c) Enveloped viruses do not kill the host cell upon release, while non-enveloped viruses trigger host cell apoptosis.
d) All of the above answers are major differences between the release of enveloped and non-enveloped viruses.

PRACTICE: All of the following descriptions of viral multiplication and viral nucleic acids are true *except* which of these answers?

a) Viruses replicate only in living cells.
b) Viruses contain DNA or RNA, not both.
c) Viruses use the cell's biosynthetic machinery to synthesize copies of themselves.
d) The nucleic acid of a virus is surrounding by a protein coat.
e) Viral mRNA, viral tRNA, and viral ribosomes are used in viral replication.

PRACTICE: All viruses must be able to do which of the following?

1. Kill the host cell.
2. Inject their viral genome into the host cell.
3. Lyse the host cell.
4. Have their viral genome replicated by the host cell.
5. Be able to reproduce in the absence of living cells.

a) 1 and 2.
b) 2 and 3.
c) 4 and 5.
d) 1 and 5.
e) 2 and 4.