

Topic: AIDS
Class: B.Sc Part –III (Hons.)
Paper- VII
Group – A

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2. Reverse transcription

- When HIV RNA enters the cell it must be `reverse transcribed` into proviral DNA before
- it can be integrated into the DNA of the host cell.
- HIV uses its reverse transcriptase enzyme to convert RNA into proviral DNA inside the cell.

- Two types of antiretroviral drug have been developed to stop the action of reverse transcriptase and the creation of proviral DNA:
- Nucleoside and nucleotide reverse transcriptase inhibitors (NRTIs and NtRTIs) block
- HIV production by inserting a nucleoside or nucleotide into the chain of HIV DNA as it is created, terminating the chain.

- Non-nucleoside reverse transcriptase inhibitors (NNRTIs) block HIV production by binding directly to the reverse transcriptase enzyme

REVERSE TRANSCRIPTION

CD4 Cell

3

The reverse transcriptase enzyme uses HIV RNA to create HIV DNA



CD4 Nucleus