Human Immunodeficiency Virus life cycle

entry: HIV requires two receptors to infect a cell:
- **CD4 molecule, which is present on helper T-cells and macrophages;**
- **a chemokine receptor.**

reverse transcription: in the cytoplasm of cell, HIV RT converts RNA to DNA. RT inhibitor drugs interfere with this step in the process.

integration: HIV DNA moves to cell's nucleus, where it is spliced into the host's DNA with help of HIV integrase enzyme. At this point, the HIV DNA is called a provirus.

transcription: of HIV genes into mRNA.

translation: of HIV mRNA into proteins. Long chains of such proteins are made by ribosomes of the cell.

assembly: HIV enzyme protease cleaves the long chains of proteins into smaller pieces, and new viral particles are formed from the cell membrane of the host cell. Protease inhibitor drugs interfere with this step of the process.