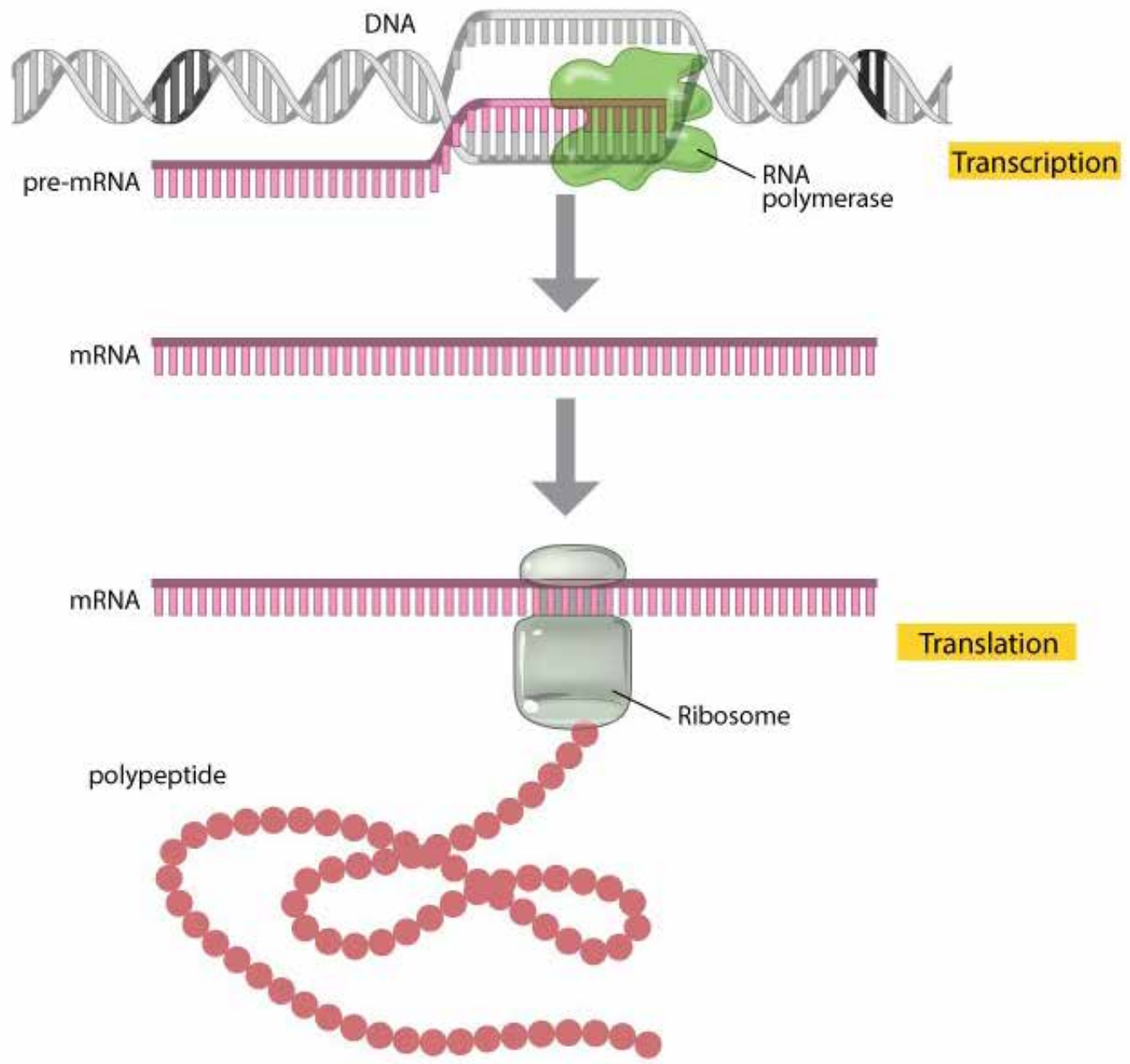


FIGURE 2.6



Transcription and translation

The HIV Life Cycle

There are seven distinct stages of the HIV life cycle: 1) binding, 2) fusion, 3) reverse transcriptase, 4) integration, 5) replication, 6) assembly, and 7) budding.

1. **Binding:** HIV targets **CD4 cells**, or immune cells (e.g., T lymphocytes) that have a CD4

molecule present on their cell membrane. HIV has a protein called Gp120 in its viral envelope that attaches to a specific region on the CD4 molecule. Along with the CD4 receptor, HIV must also bind to another molecule on the host cell membrane called a co-receptor. The two most common co-receptors are CXCR4, which is expressed on T cells, and CCR5, which is expressed on macrophages and on some pop-