

Steps of Transcription



Learning Objectives

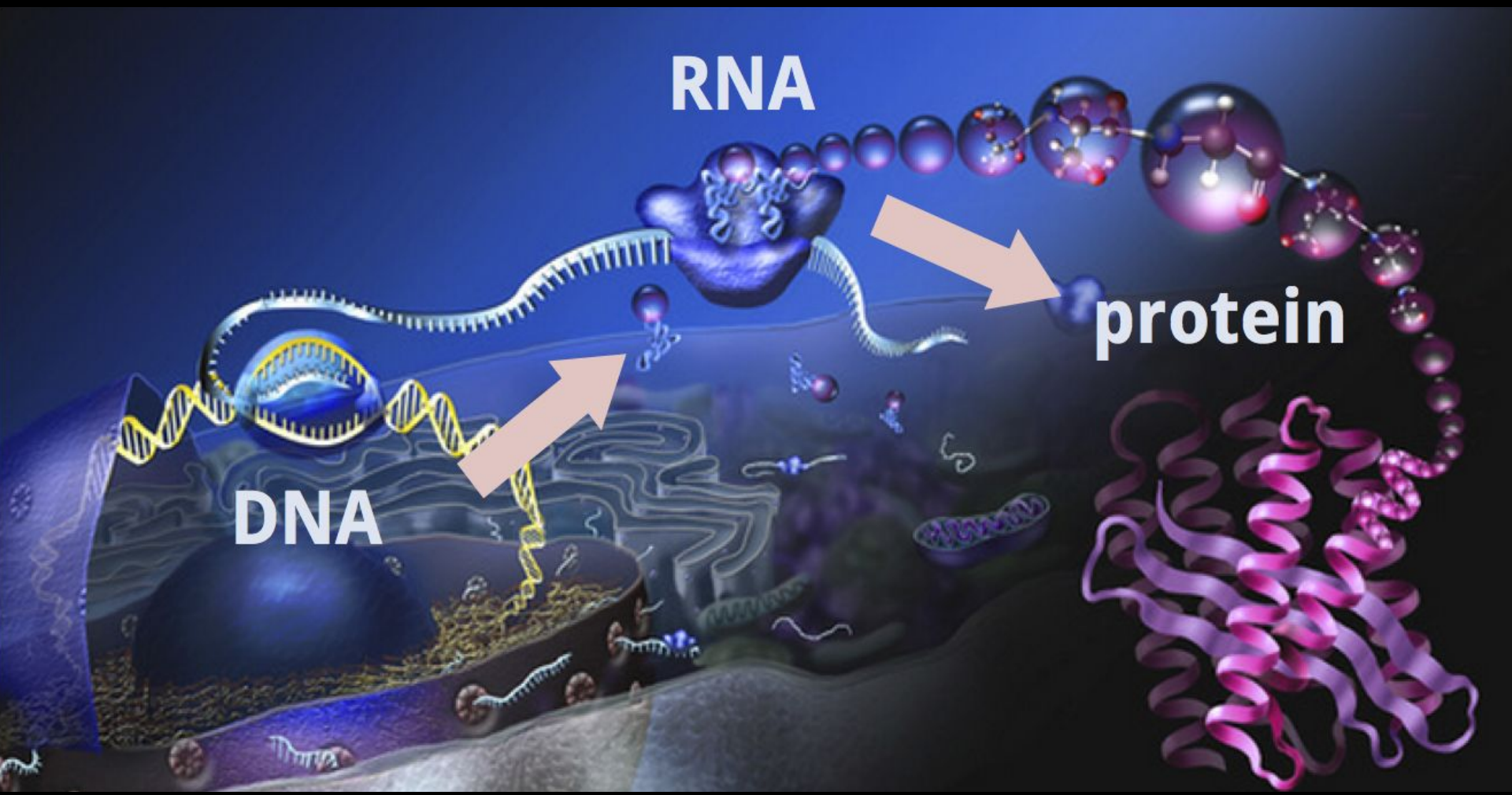
- Describe the steps of DNA transcription

Central Dogma

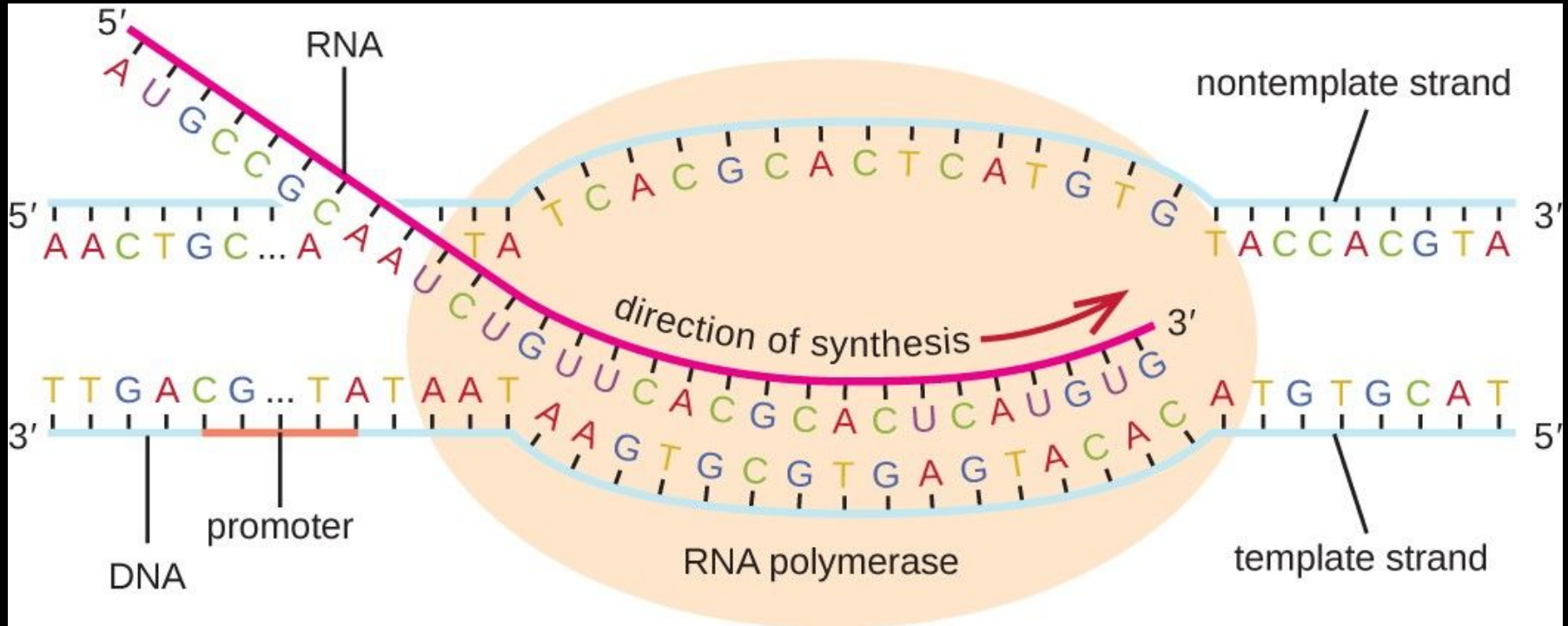
(Nucleus)

(Cytoplasm)

DNA → Transcription → RNA → Translation → Protein



RNA Polymerase



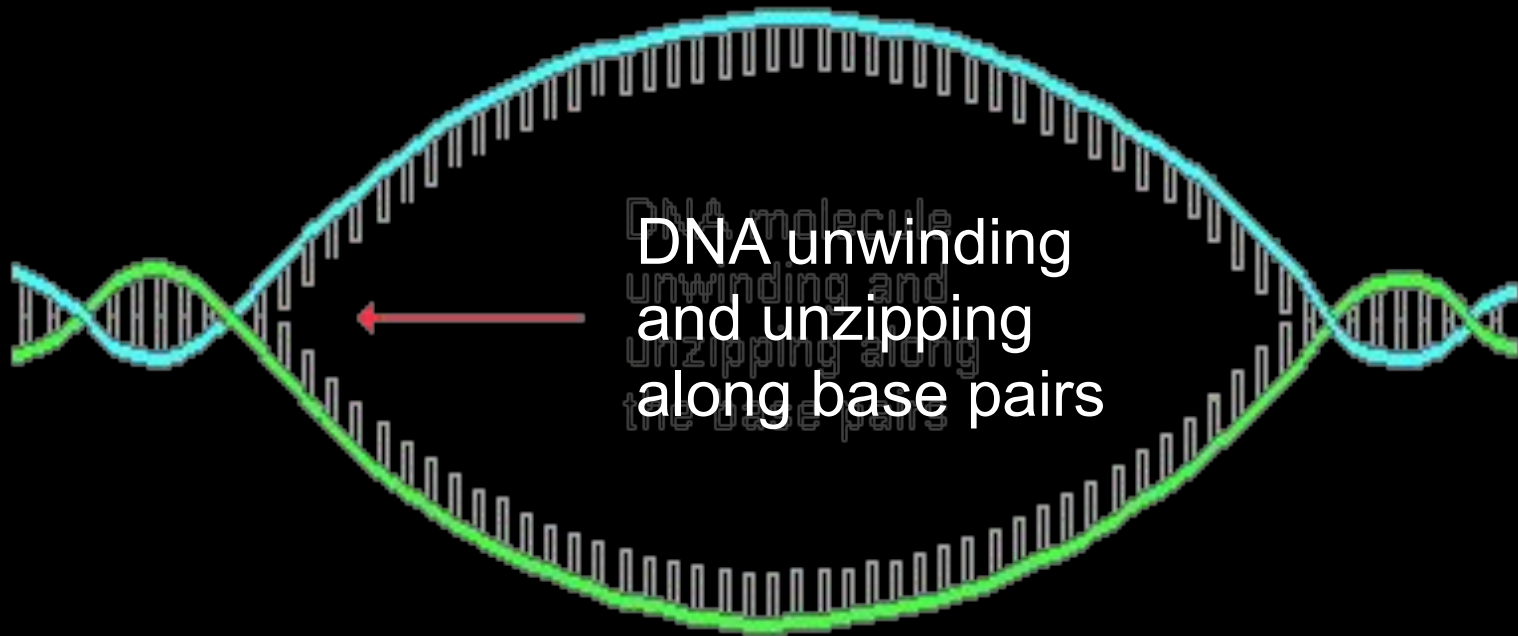
RNA polymerase – an enzyme that makes a strand of messenger RNA.

Steps of Transcription

(occurs in the nucleus)

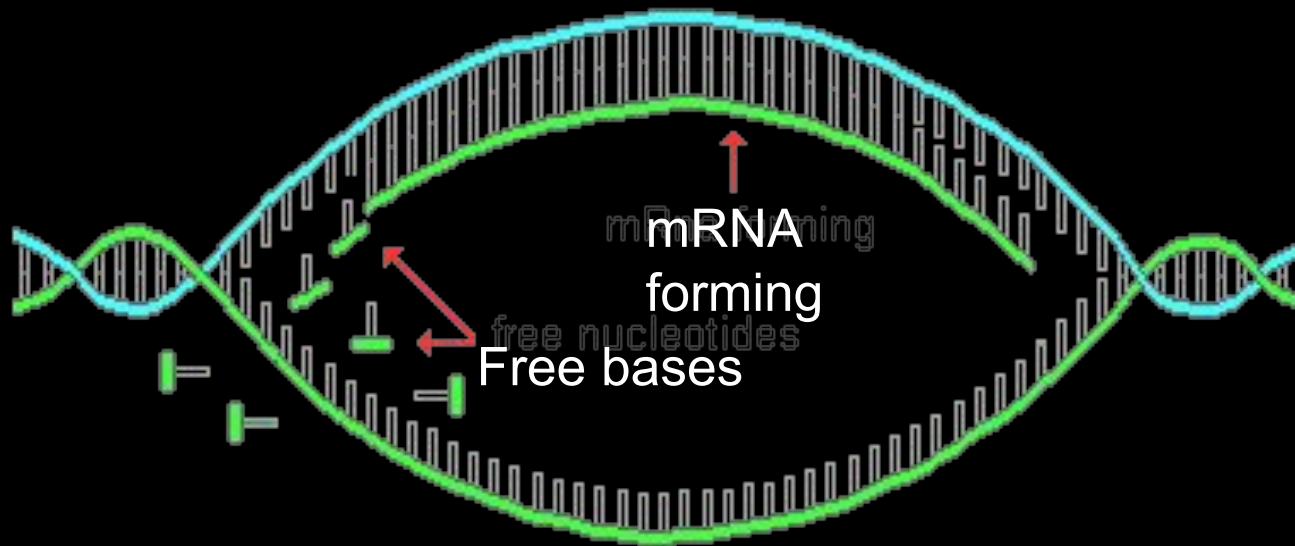
1. Initiation
2. Elongation
3. Termination

Step 1: Initiation



RNA polymerase finds the DNA and unwinds/unzips the DNA strands.

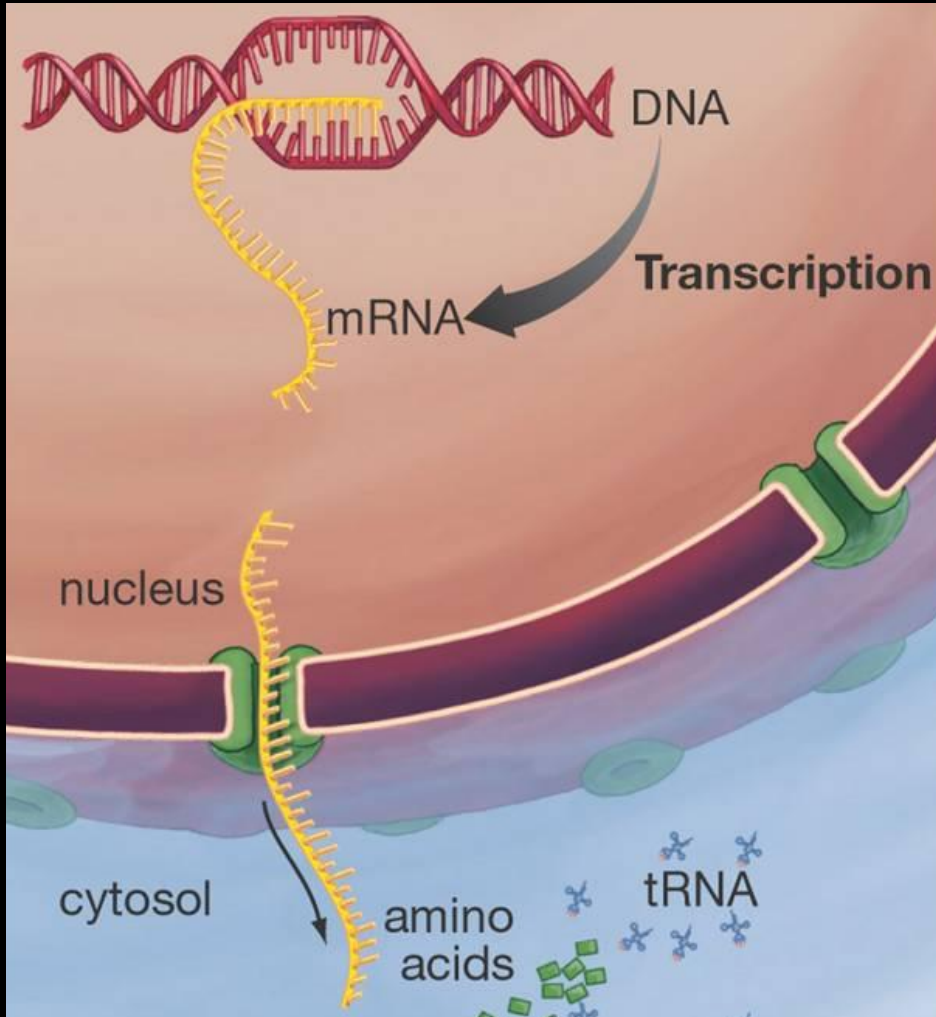
Step 2: Elongation



RNA polymerase uses one strand of DNA as a template to assemble free nucleotides into mRNA.

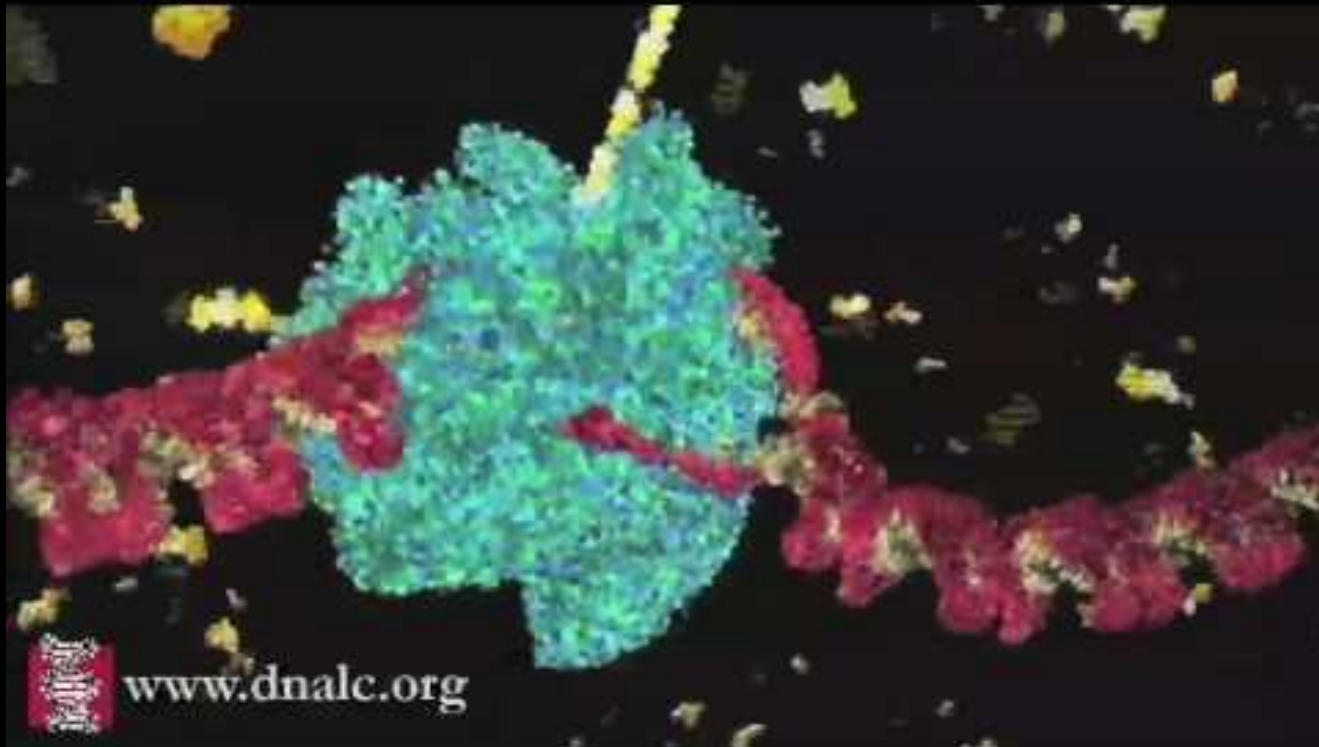


Step 3: Termination



- Newly synthesized mRNA strand is released from DNA template.
- The mRNA leaves the nucleus and enters the cytoplasm.
- DNA re-zips and re-twists.

YouTube Video



Stop Here



YouTube Video

