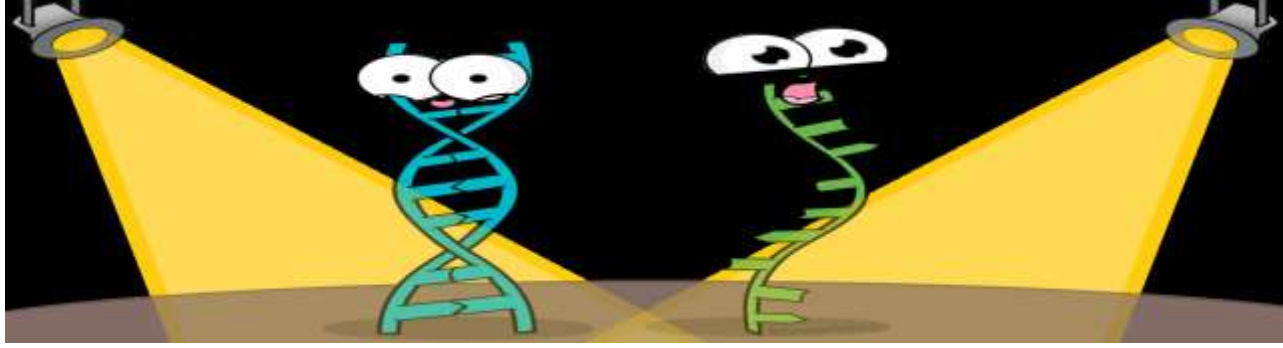
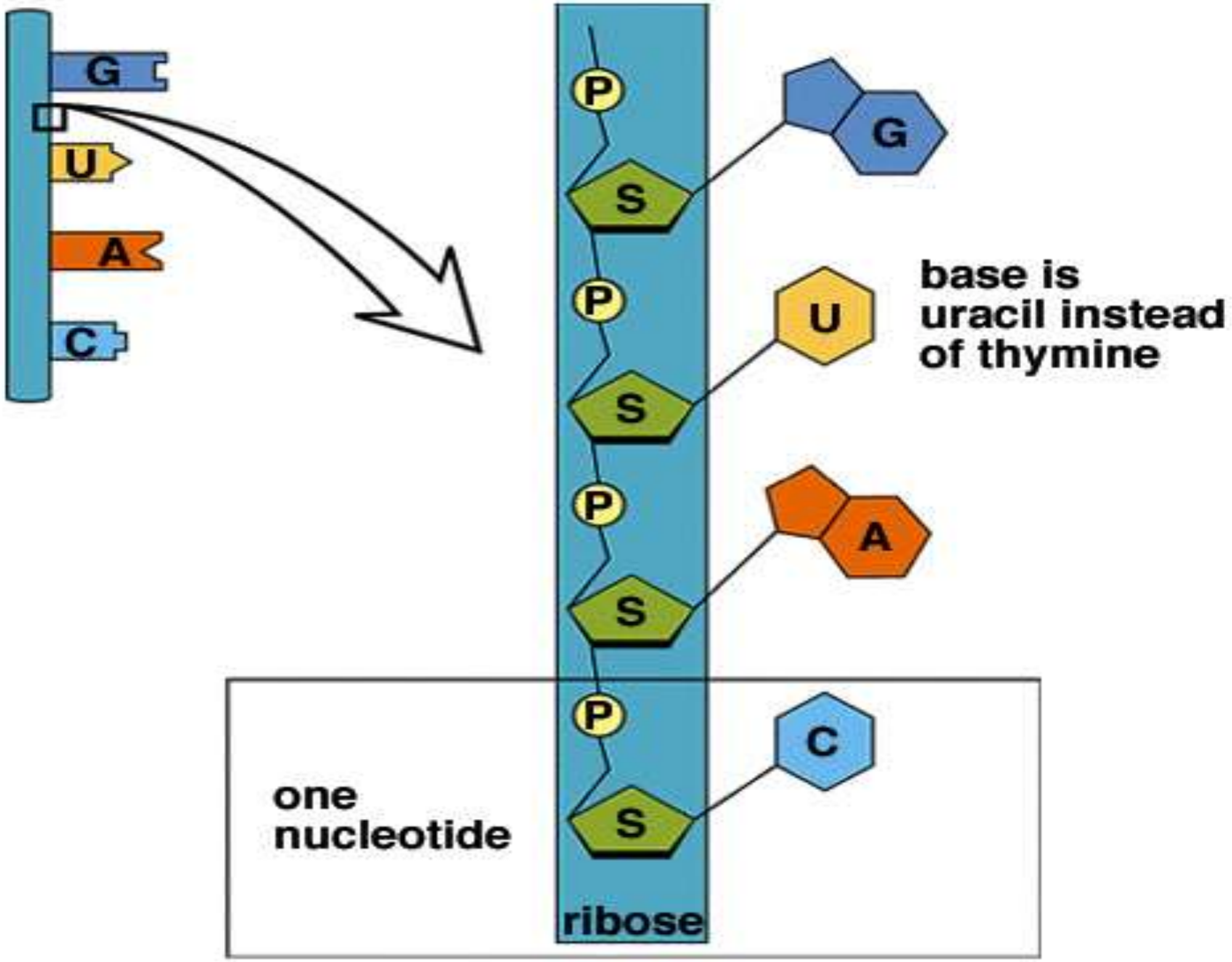
STRUCTURE of RNA

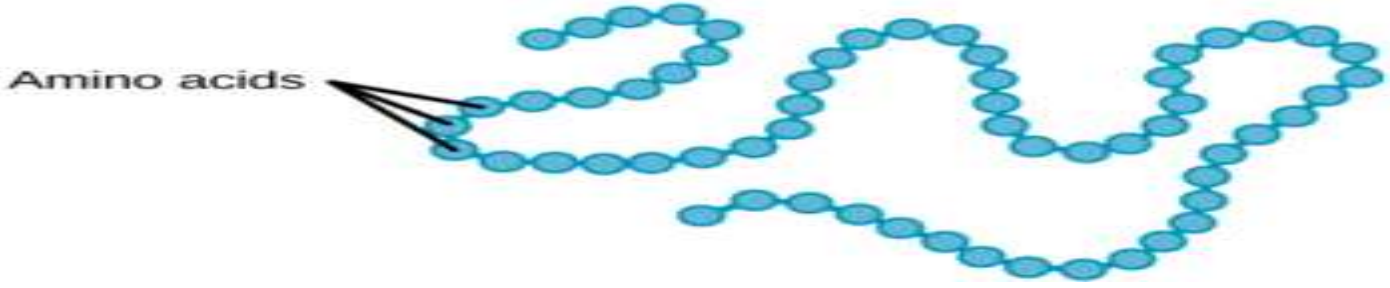


- Very similar (in principle) to structure of DNA.
- Differences:
  - Has **Ribose** Sugars (DNA has **DeOxy**Ribose Sugars).
  - Has only **one** strand (so **no pairing** can occur).
  - Is **shorter**, and **not twisted** into a helix.
  - Has **Uracil** instead of Thymine: **G≡C** and **A=U**
  - Is created from a section of one DNA strand.
  - Moves from the nucleus into the cell's cytoplasm.

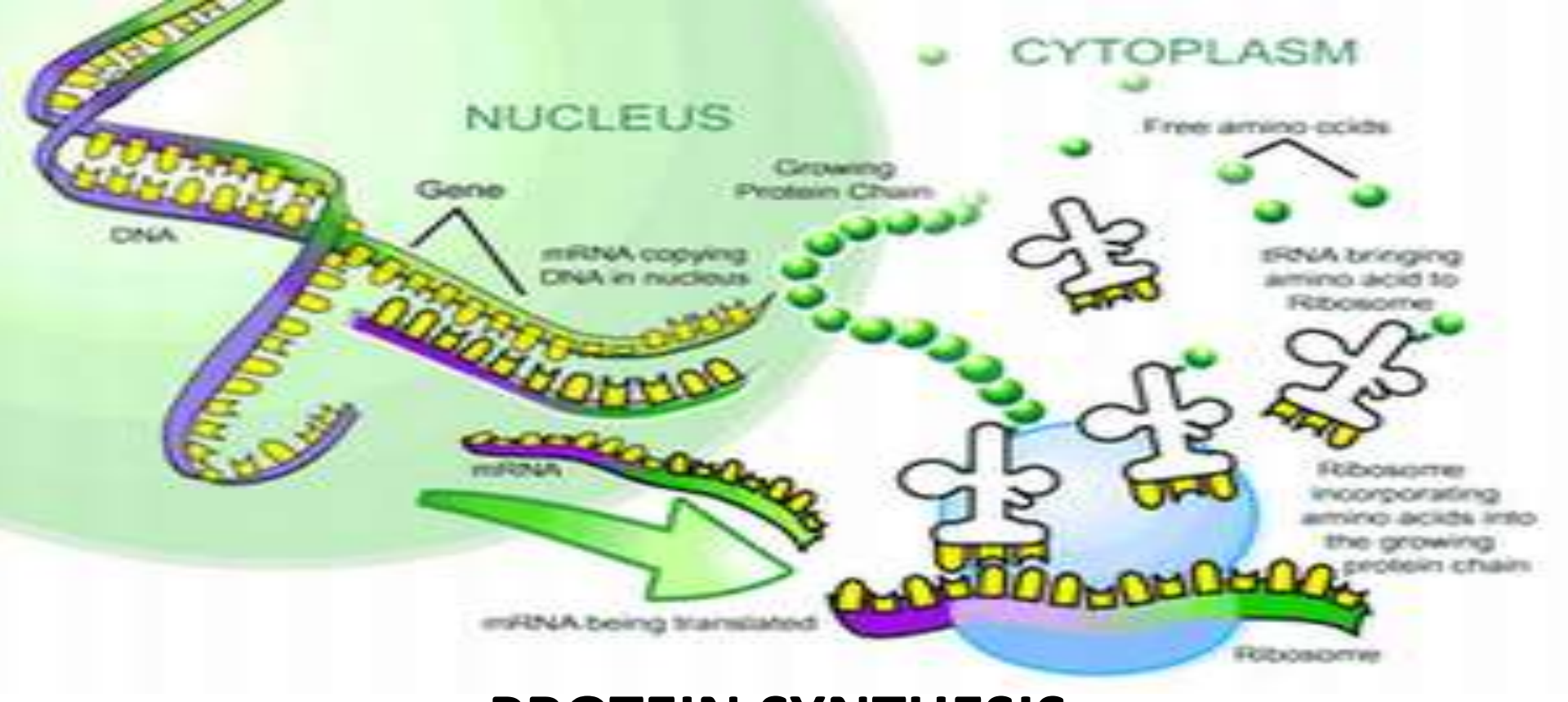
Structure of RNA



MAKING a PROTEIN



- The DNA strand unzips to expose its N-Bases.
- This message is **trans-scribed** (written across), as free RNA nucleotides bond (with A, U, G, C). ***Transcription***.
- This mRNA unzips, takes its message out of the nucleus, and puts its codon onto a ribosome.
- A tRNA (of 3 nucleotides) **translates** this message using **anti**codons, bringing its specific amino acid. ***Translation***.
- The amino acids join each other with peptide bonds. If 50 or more are joined together, it is called a **Protein.**
- The rRNA releases the mRNA units from the ribosome.



PROTEIN SYNTHESIS

TRANSCRIPTION *WRITES* THE PLAN, *ACROSS*, ONTO THE mRNA.

THIS CODON IS TAKEN OUT THE NUCLEUS, ONTO A RIBOSOME.

THE tRNA TRANSLATES WITH ITS ANTICODON, PLUS ITS AMINO ACID.