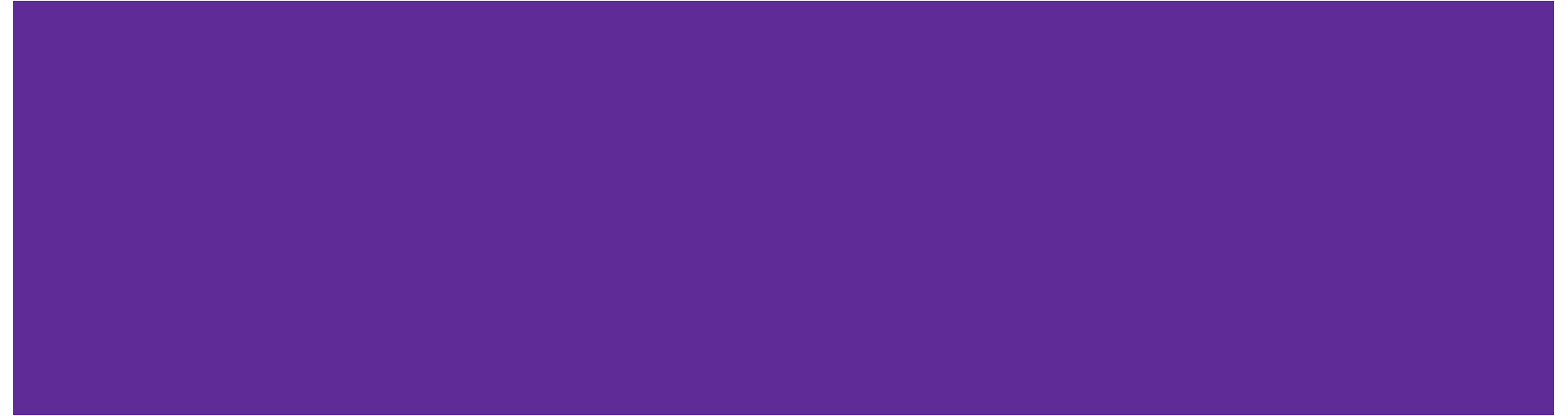


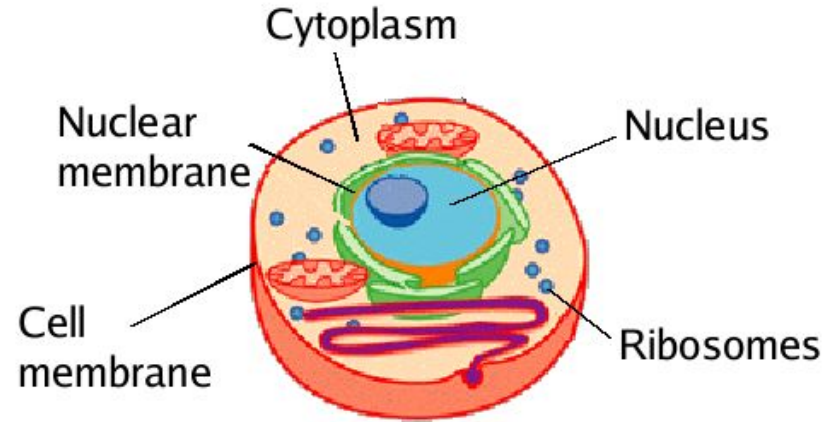
# All About Ribosomes

By Pearl Teiko



# What is a ribosome?

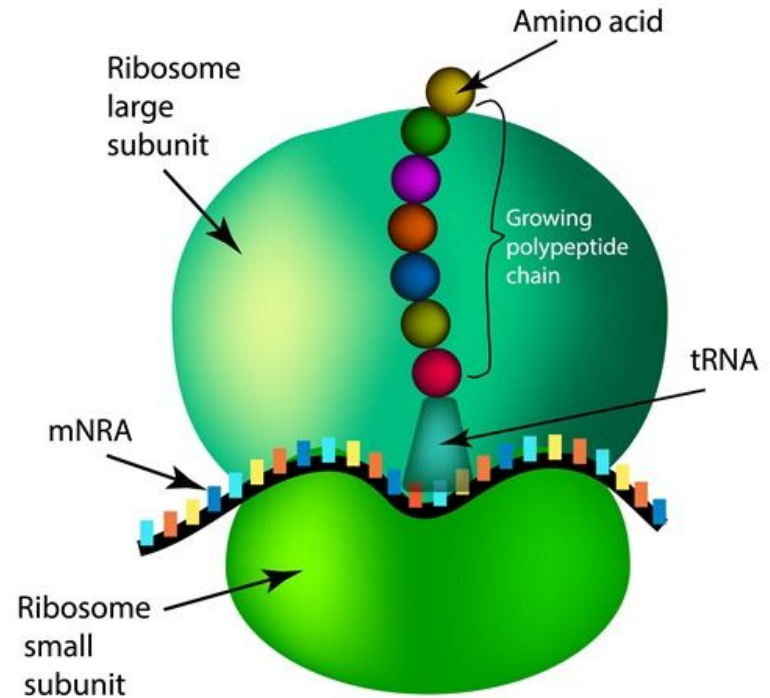
- A **ribosome** is a cell organelle either located in the cytoplasm (**free ribosomes**) or on the endoplasmic reticulum (**bound ribosomes**).
- Ribosomes are crucial in protein synthesis.
- Ribosomes made of **rRNA** (Ribosomal RNA) molecules and proteins.



# Structure and Function

- Ribosomes are made of two parts: the **large subunit** (assembles polypeptide chains from amino acids) and the **small subunit** (reads mRNA).
- Cells that have high rates of protein synthesis would have large amounts of ribosomes.
- **Bound ribosomes** produce proteins that are exported and used elsewhere. **Free ribosomes** produce proteins that are used within the cell.

## Ribosome



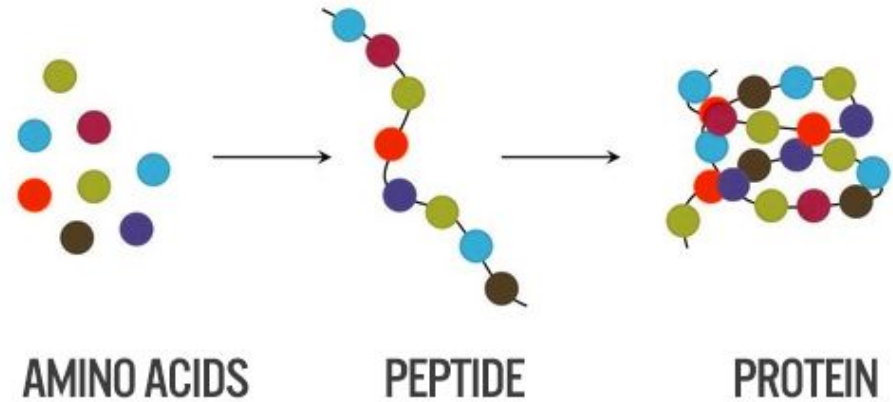
# Molecules

Ribosomes use the following molecules:

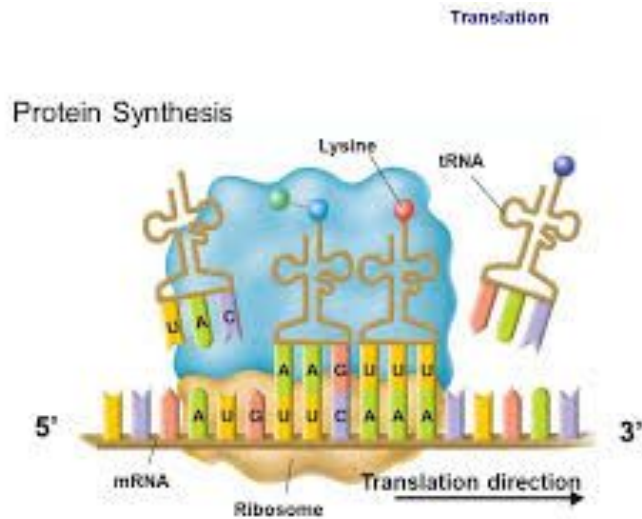
- **Ribosomal RNA (rRNA)**
- **proteins**

End products of protein synthesis:

- A sequence of amino acids bound by polypeptide bonds (a protein)



# Major Processes



- Ribosomes are involved in protein synthesis. Translation occurs in this organelle.
- **Translation** is the stage of protein synthesis that occurs in the ribosome. tRNA molecules attach individual amino acids to the mRNA, forming a chain of amino acids.

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