

SNS COLLEGE OF PHYSIOTHERAPY

**Affiliated To The Tamil Nadu Dr. MGR Medical University, Chennai
Coimbatore– 641035**



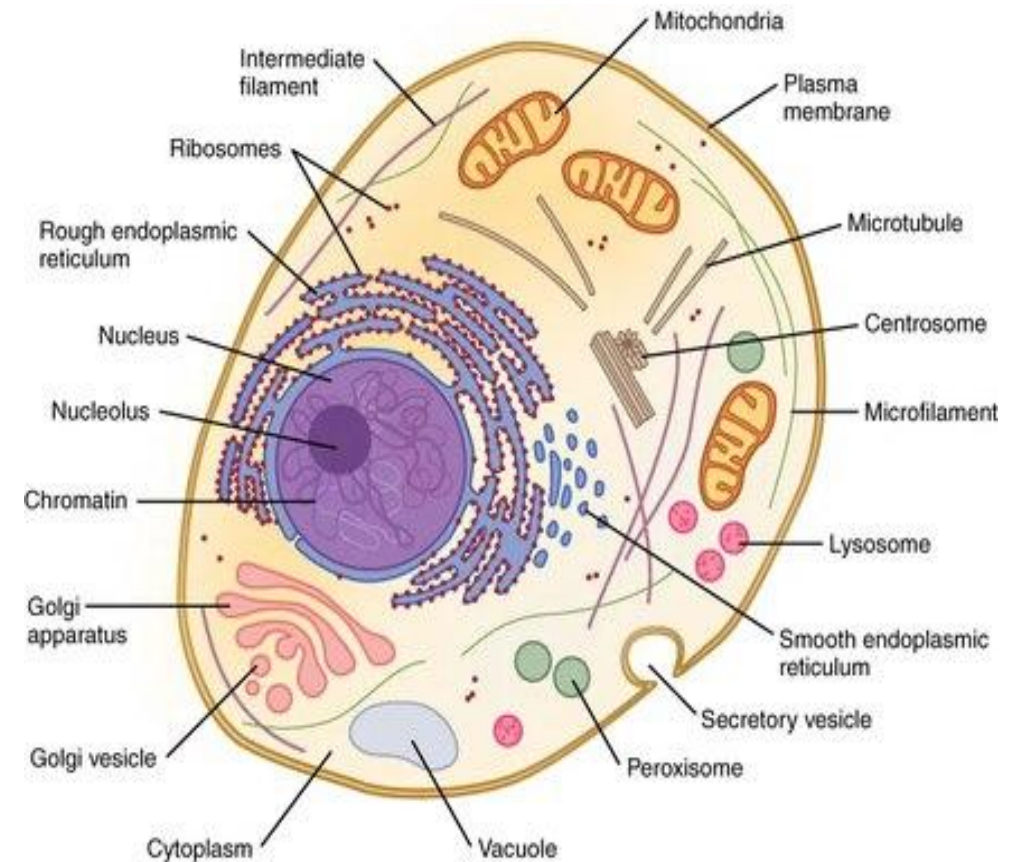
COURSE NAME: ANATOMY II

SUBJECT CODE: 6273

TOPIC: CELL

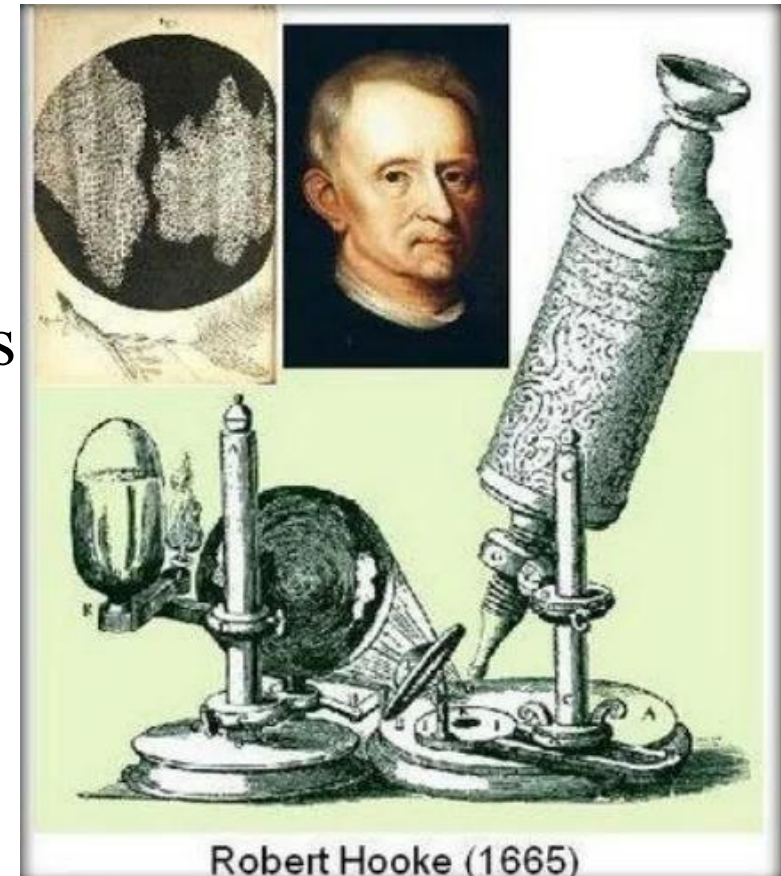
Definition of Cell

- The cell is the basic structural and functional unit of the human body.
- All living organisms are composed of one or more cells.
- Cells carry out all vital physiological functions.



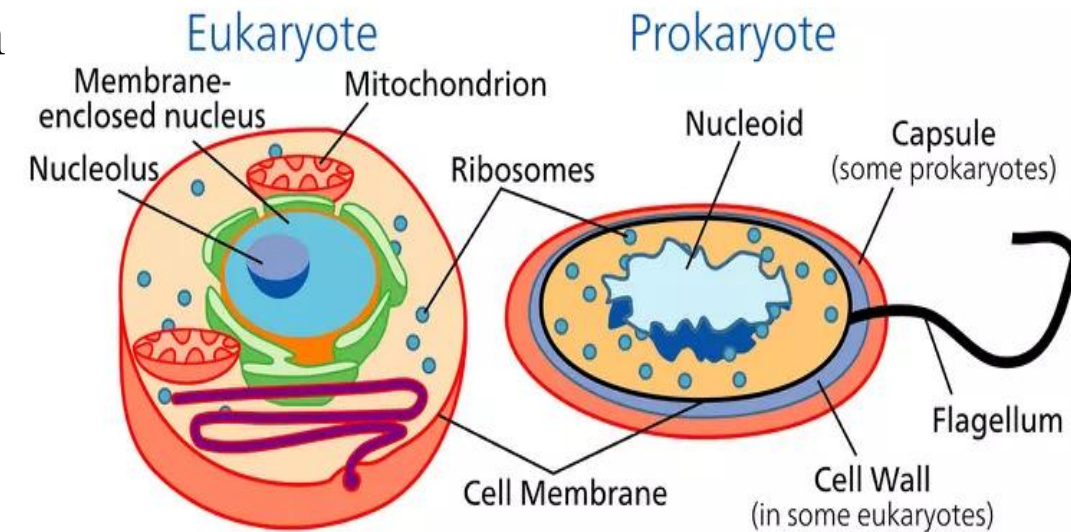
Discovery of Cell

- The cell was discovered by Robert Hooke in 1665.
- He observed cork cells using a simple microscope.
- Modern microscopy has revealed complex cell structures



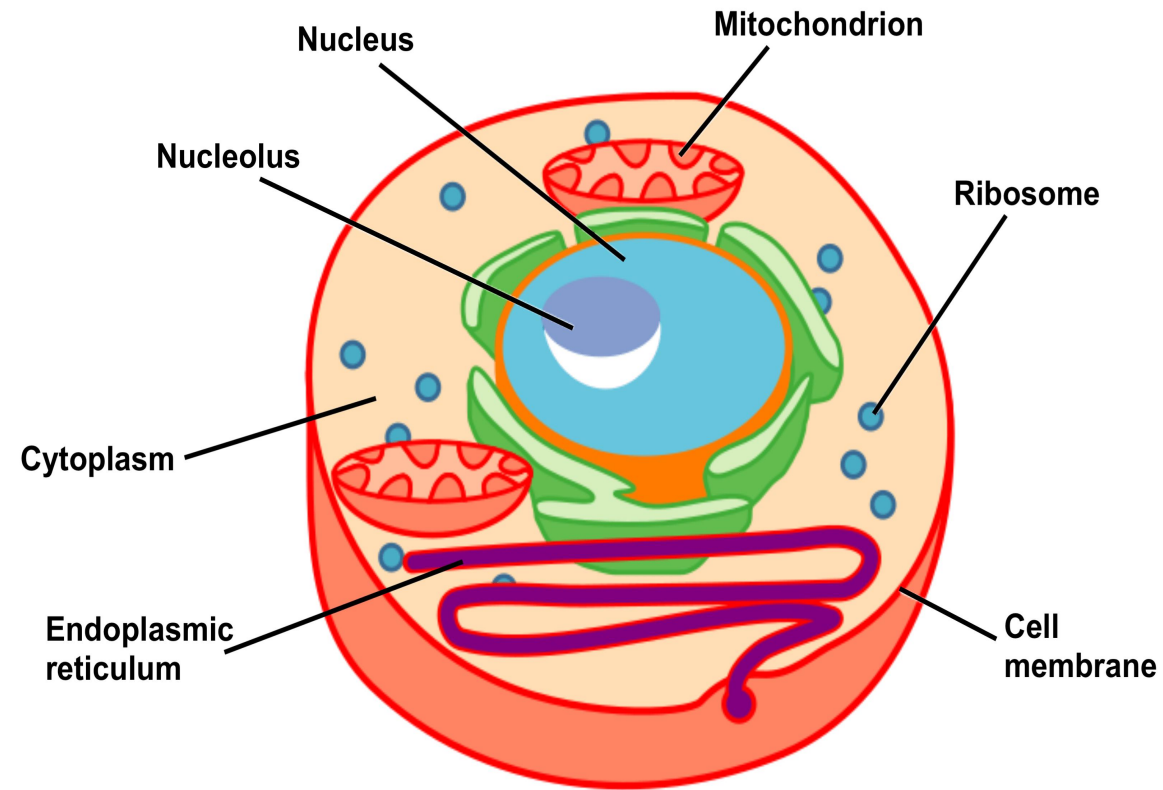
Types of Cells

- Prokaryotic cells – lack a true nucleus (e.g., bacteria)
- Eukaryotic cells – have a true nucleus (e.g., human)
- Human body is made of eukaryotic cells.



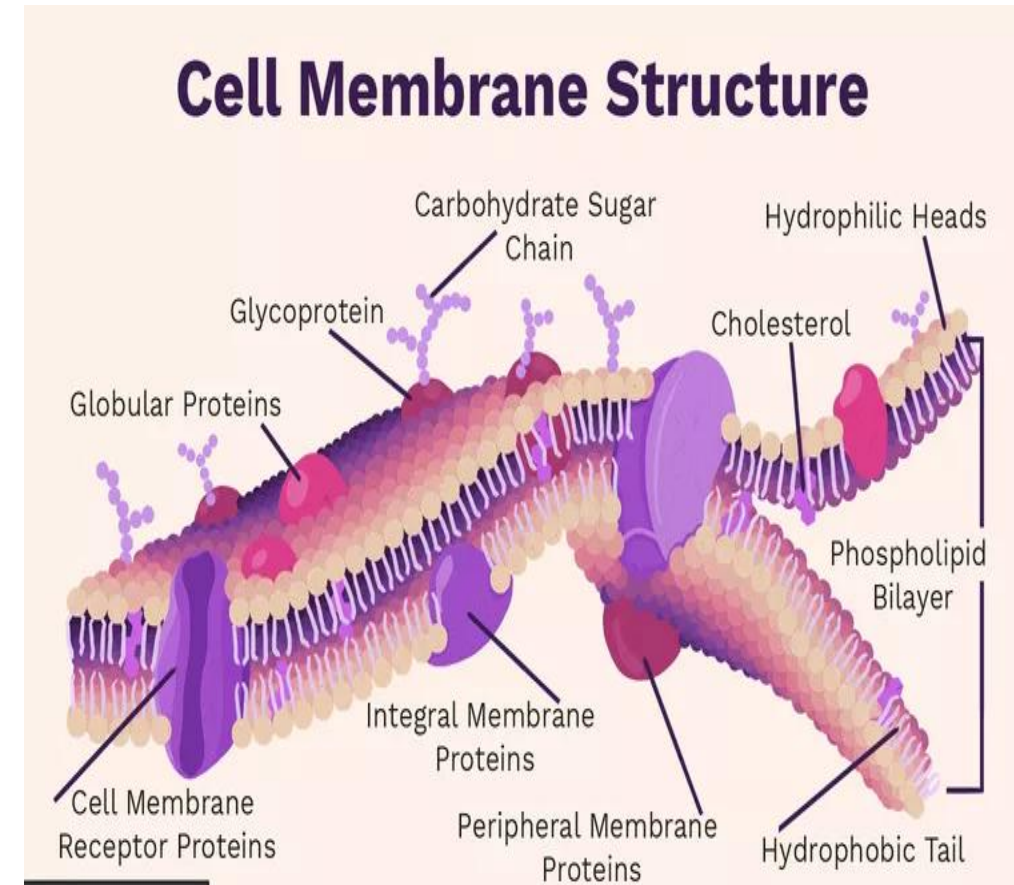
Main Parts of a Cell

- Cell membrane
- Cytoplasm
- Nucleus
- Cell organelles



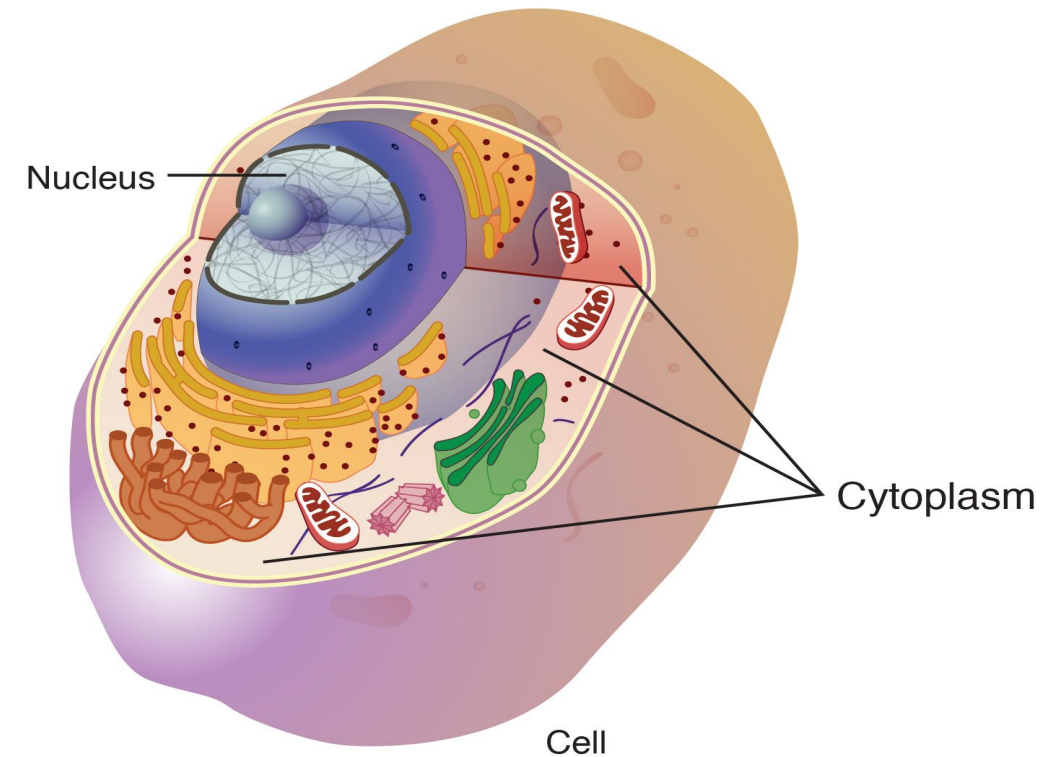
Cell Membrane

- Outer covering of the cell.
- Selectively permeable membrane.
- Regulates movement of substances in and out of the cell.



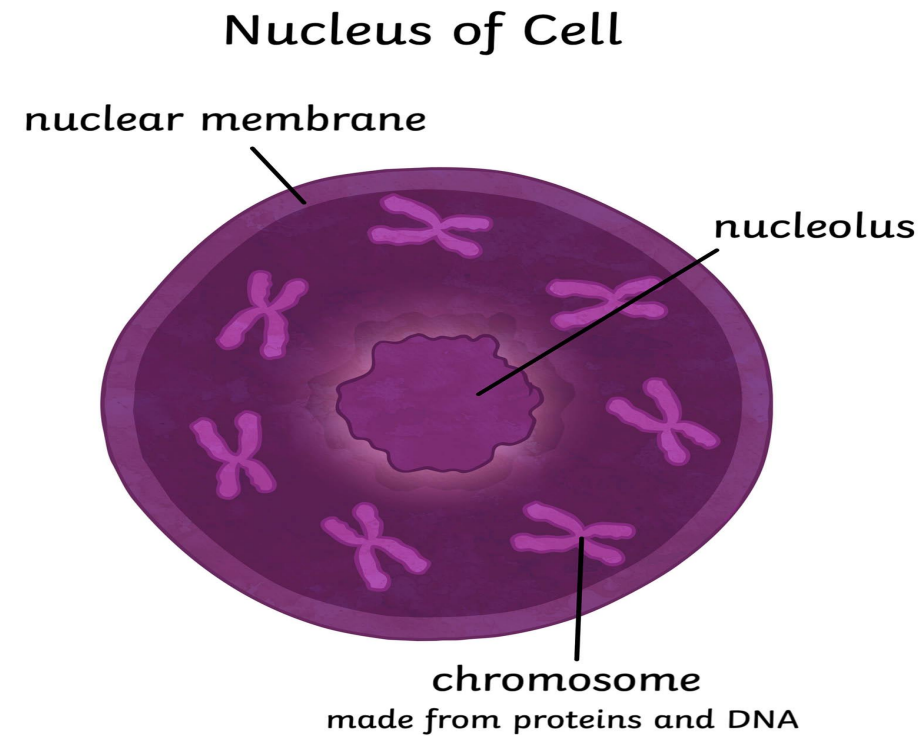
Cytoplasm

- Jelly-like substance inside the cell.
- Contains cell organelles.
- Site of many metabolic reactions.



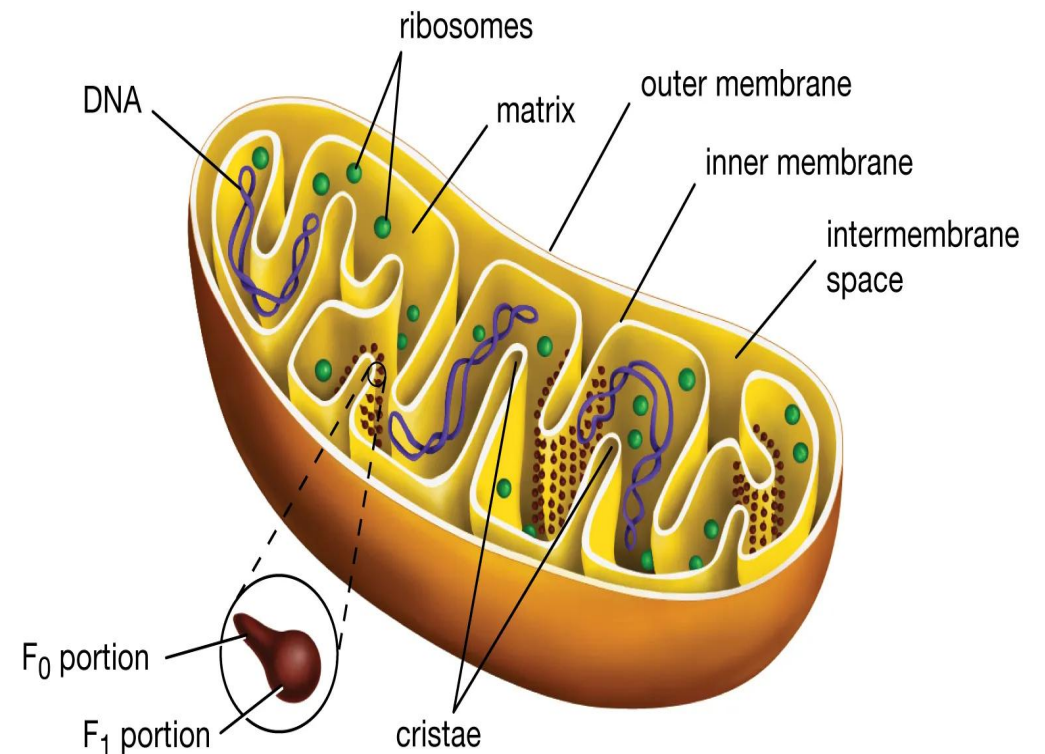
Nucleus

- Controls all activities of the cell.
- Contains genetic material (DNA)
- Involved in cell division and growth



Mitochondria

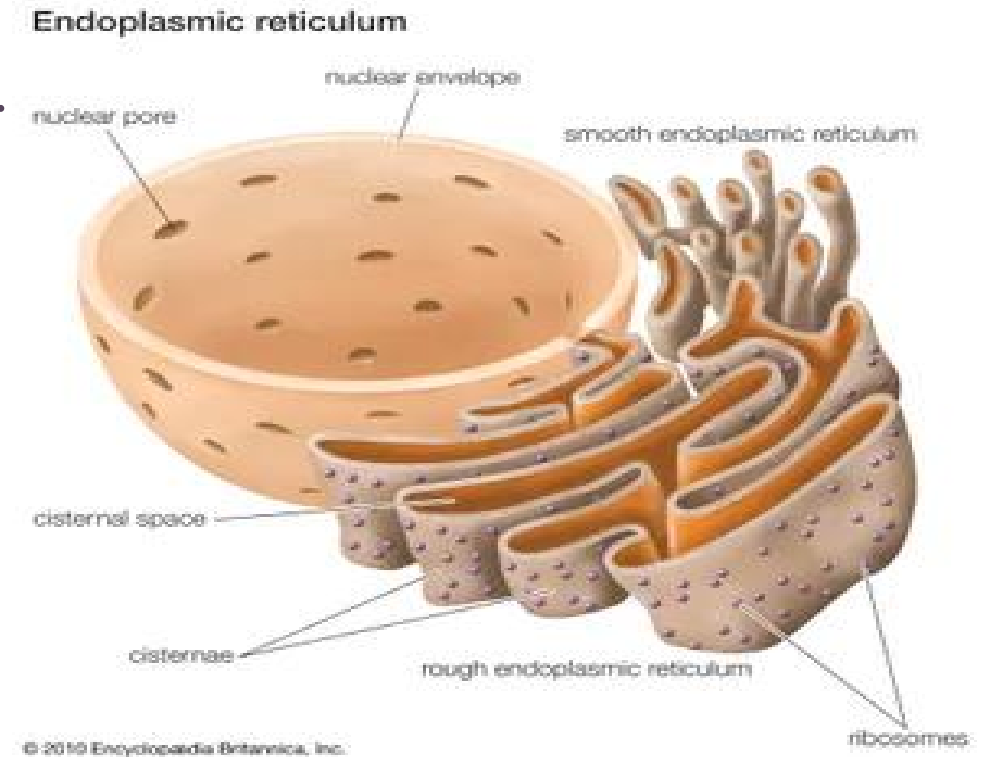
- Known as the powerhouse of the cell.
- Produces energy in the form of ATP.
- Important for cellular respiration.



© Encyclopædia Britannica, Inc.

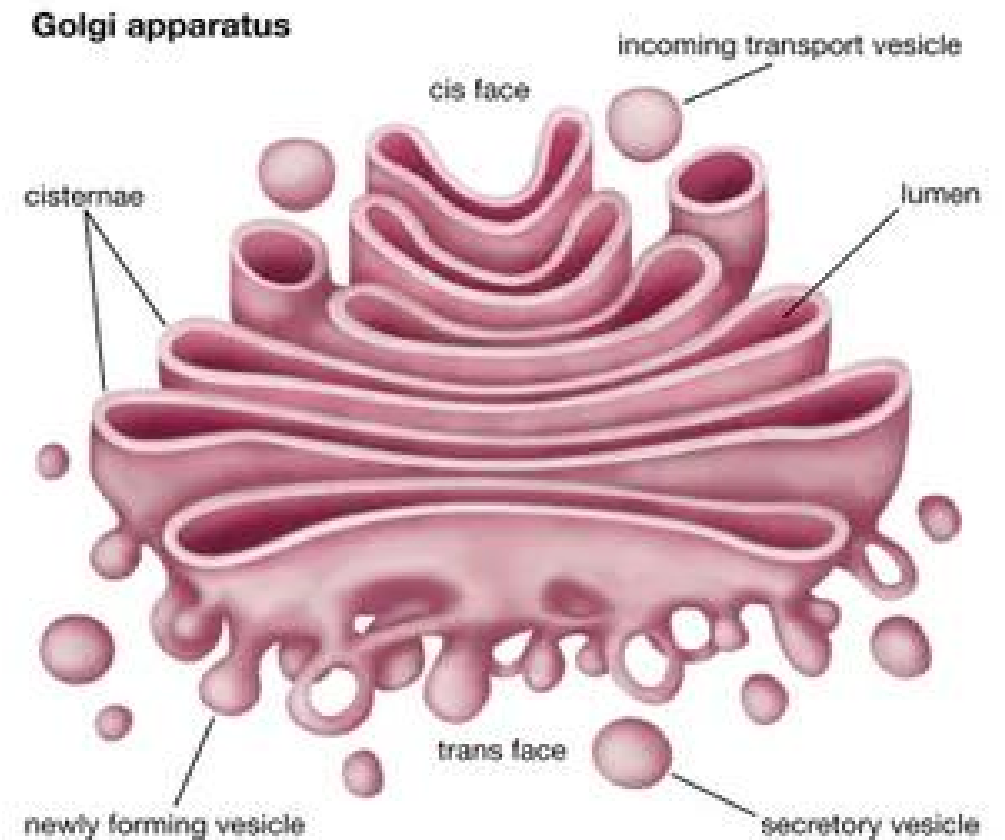
Endoplasmic Reticulum

- Rough ER – protein synthesis.
- Smooth ER – lipid synthesis and detoxification.
- Acts as a transport system within the cell.



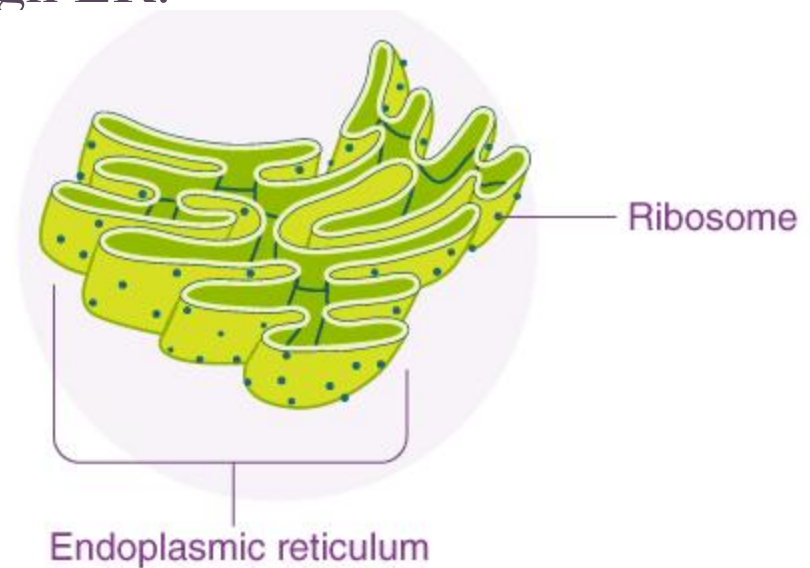
Golgi Apparatus

- Modifies, packages, and transports proteins.
- Plays a role in secretion.
- Important for intracellular transport.



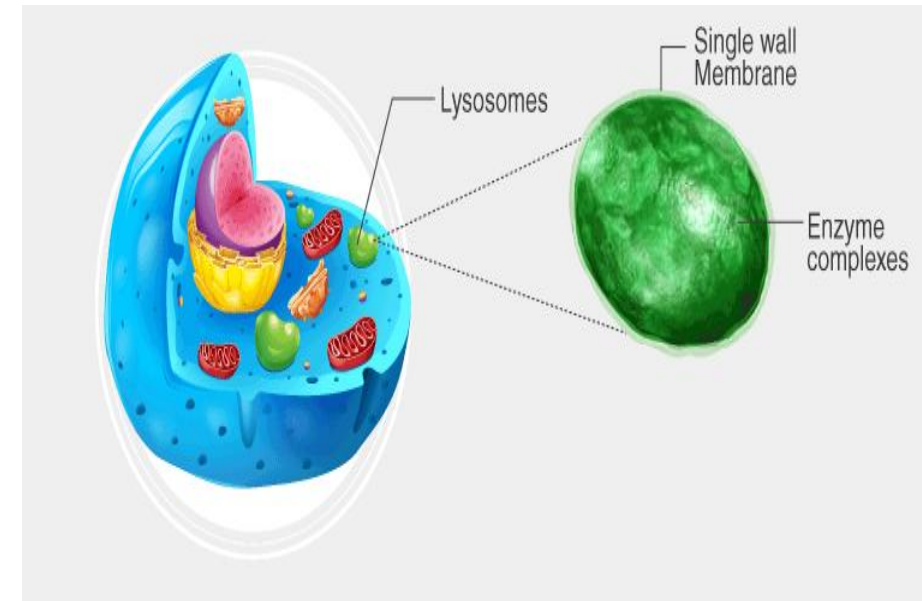
Ribosomes

- Site of protein synthesis.
- Found freely in cytoplasm or attached to Rough ER.
- Essential for cell growth and repair.



Lysosomes

- Known as the suicidal bags of the cell.
- Contain digestive enzymes.
- Help in removal of waste and damaged organelles.

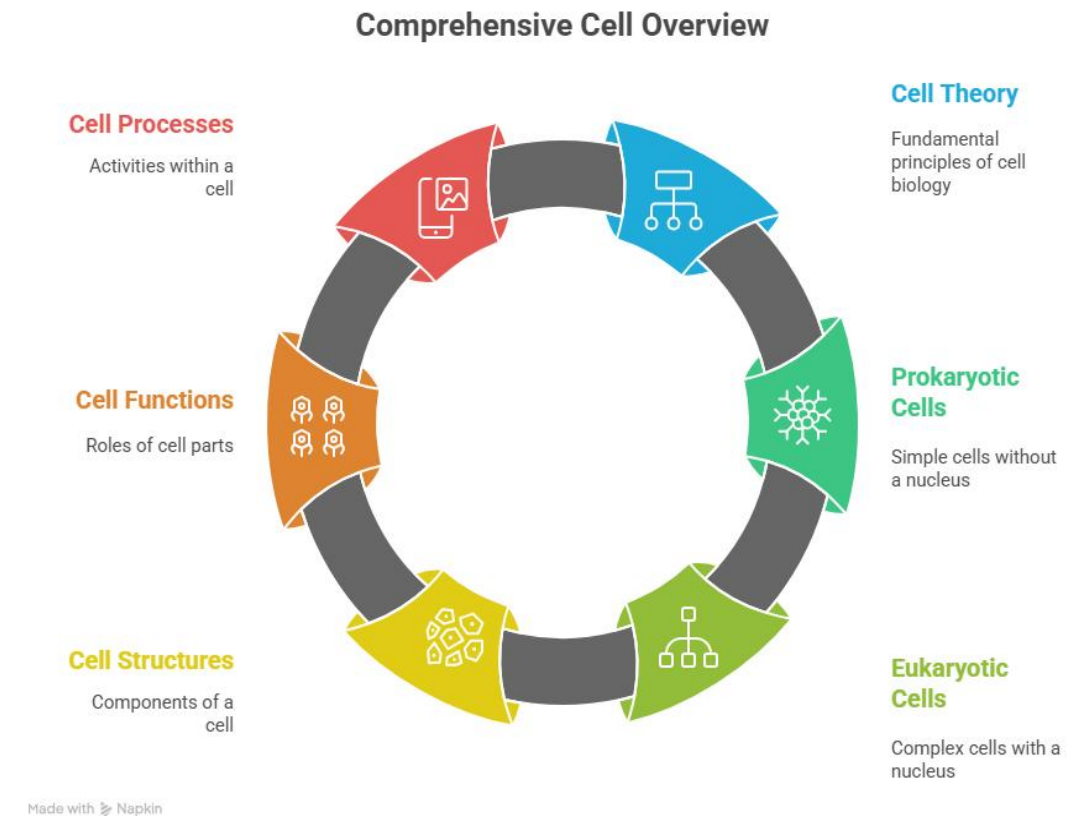


Functions of Cell

- Provides structure to the body.
- Carries out metabolic activities.
- Helps in growth, repair, and reproduction.

Summary

- Cell is the basic unit of life.
- Each part of the cell has a specific function.
- Proper cell function is essential for human health.



Thank you

