

Cell organelles

कोशिकांग

⇒ कोशिका के भीतर पाए जाने वाले अणुओं को कोशिकांग कहते हैं।

"Molecules that present inside the cell"

⇒ कोशिकांग
Cell organelles

→ तरल अवस्था liquid ⇒ Protoplasm जीवद्रव्य

→ ठोस अवस्था solid

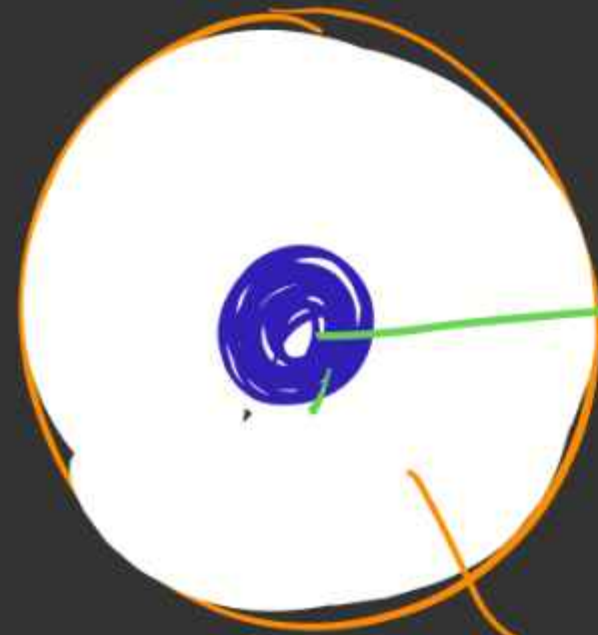
Protoplasm

जीवद्रव्य

1) कोशिका के अंदर पाया जाने वाला तरल द्रव
It is liquid present inside the cell

2) Term → प्रोकिन्जे प्रकिन्जे
शब्द

3) "जीवन का भौतिक आधार जीवद्रव्य" है →
"protoplasm is physical Basis of life" ^२
हक्सले
Huxley



Nucleoplasm
કેન્દ્રકરૂપ



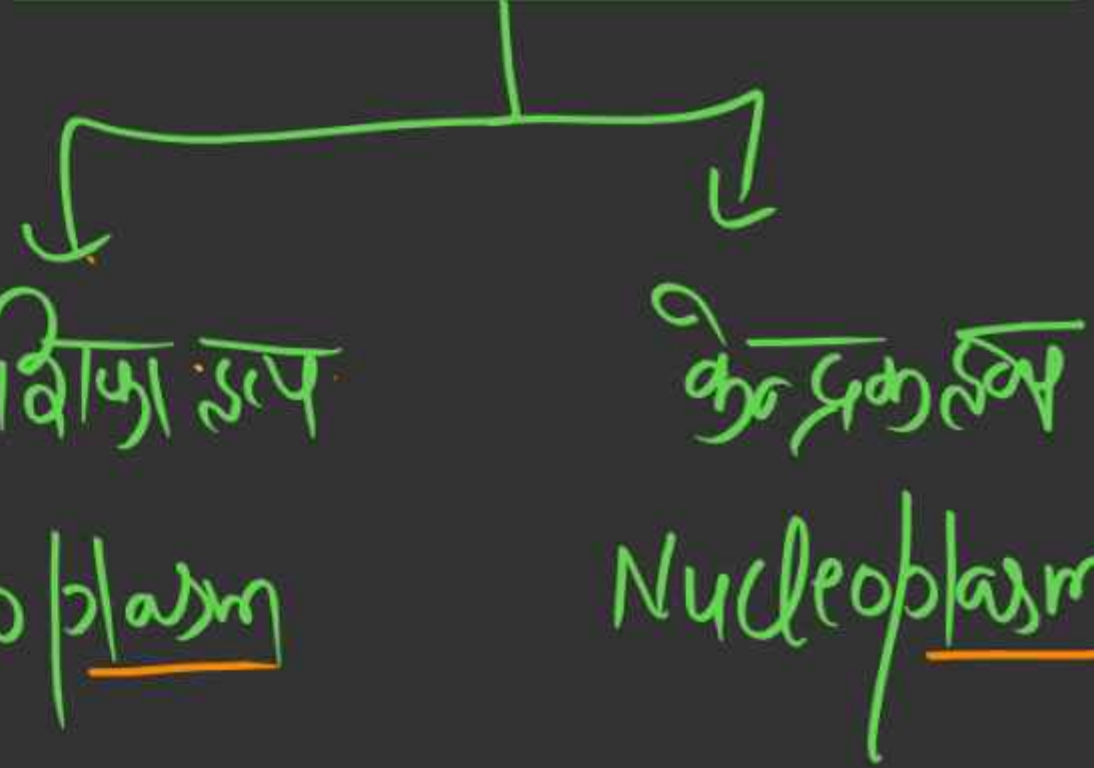
કોષિકા રૂપ
Cytoplasm



Protoplasm

જીવરૂપ (liquid)

Protoplasm
જીવરૂપ



① કોષિકા રૂપ
Cytoplasm

કેન્દ્રકરૂપ
Nucleoplasm

① Cell wall कोशिका भित्ति

1) खोज $\Rightarrow$ रॉबर्ट हुक Robert Hooke
Discovery

2) यह केवल पौधे, कवक व जीवाणु में पायी जाती है।

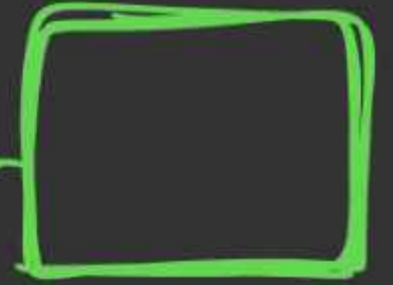
It is present in plant, fungus, & Bacteria

3) यह जंतु कोशिका में नहीं पायी जाती है।

It is not present in Animal cell

Cell Wall कोशिका भित्ति

1) पादप में ⇒ सैल्युलोज की बनी होती है
Plants Made up of cellulose



Imp 2) कवक में ⇒ काइलिन की बनी होती है
Fungus Made up of chitin



3) जीवाणु में ⇒ पेप्टाइडोग्लाइकॉन की बनी होती है
Bacteria Made up of peptidoglycon.

Note ⇒ विषाणु बिना कोशिका वाले सजीव हैं
Viruses are without cell organism

② विषाणु पर कोशिका सिद्धान्त लागू नहीं होता है

Cell theory is not work on Virus

③ सजीव व निजीव के मध्य में कड़ी कहते हैं
Chain B/w Living & non-living

work of cell wall
कोशिका भित्ति के कार्य

⇒ कोशिका का आकृति व सुरक्षा प्रदान करना

Provide shape & protection

② Cell membrane
कोशिका झिल्ली

⇒ Plasma membrane
प्लाज्मा झिल्ली

Selective
membrane
चयनात्मक झिल्ली

⇒ खोज → रोबर्ट हुक Robert Hooke
Discovery

⇒ Plasma membrane term
प्लाज्मा झिल्ली शब्द

⇒ Chamber से Negali [पृष्ठ]
कैमर और नागेली

⇒ ये सभी कोशिकाओं में पायी जाती है

It is present in All cell

(पादप, कवक, जीवाणु, जंतु)
Plant, fungus, Bacteria, Animal

Cell Membrane

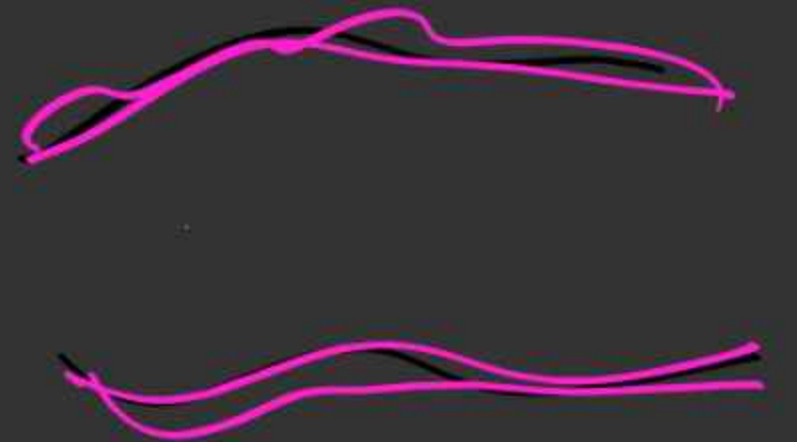
कोशिका झिल्ली

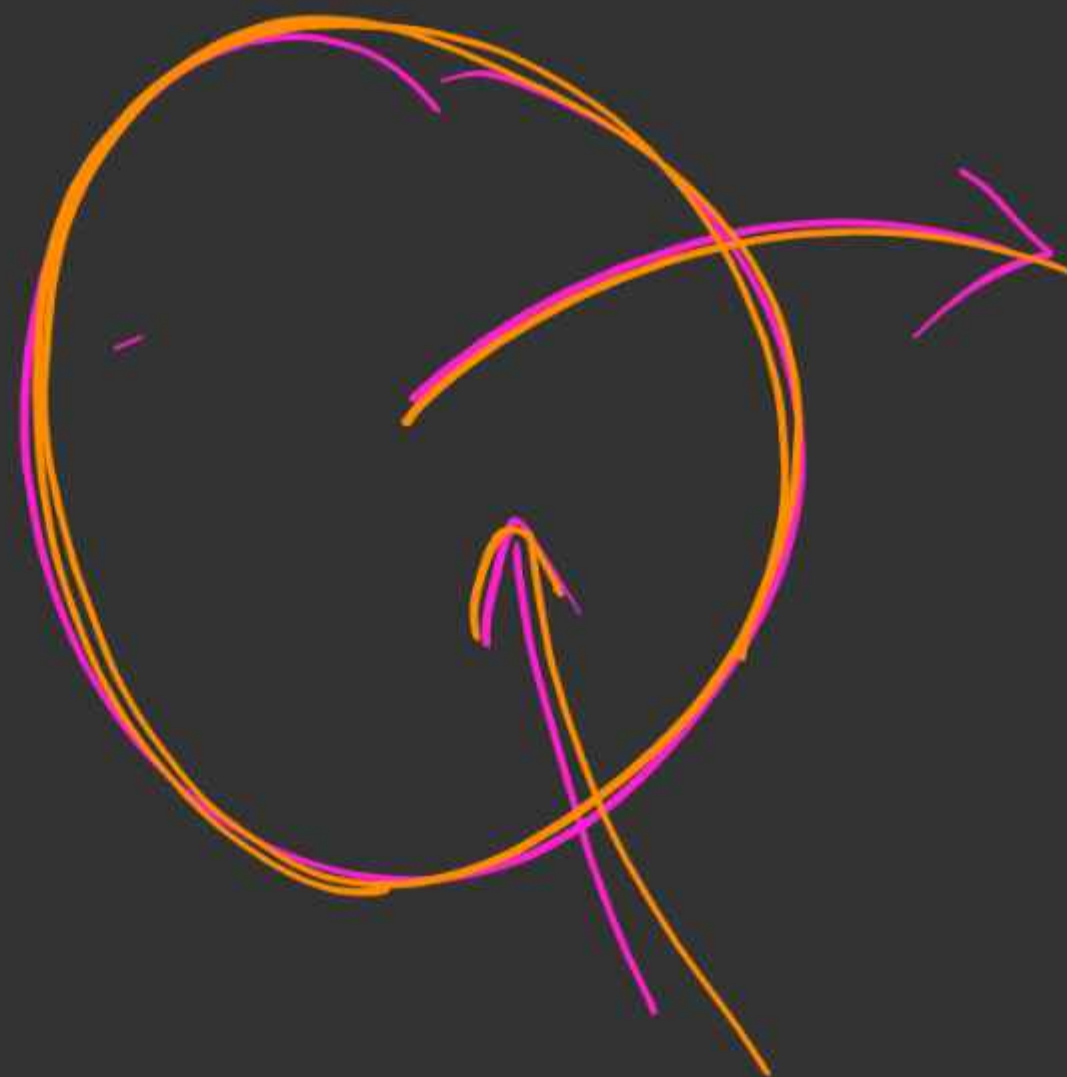
↳ सभी में फॉस्फोलिपिड की बनी होती है

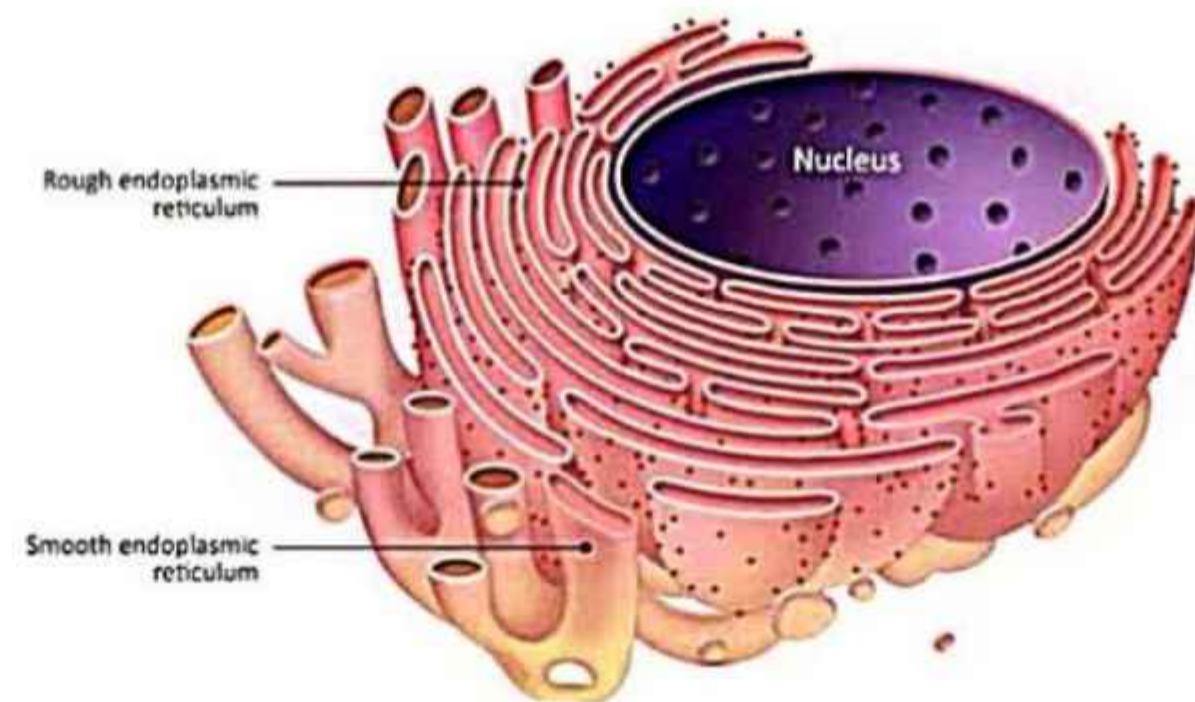
Made up of phospholipid

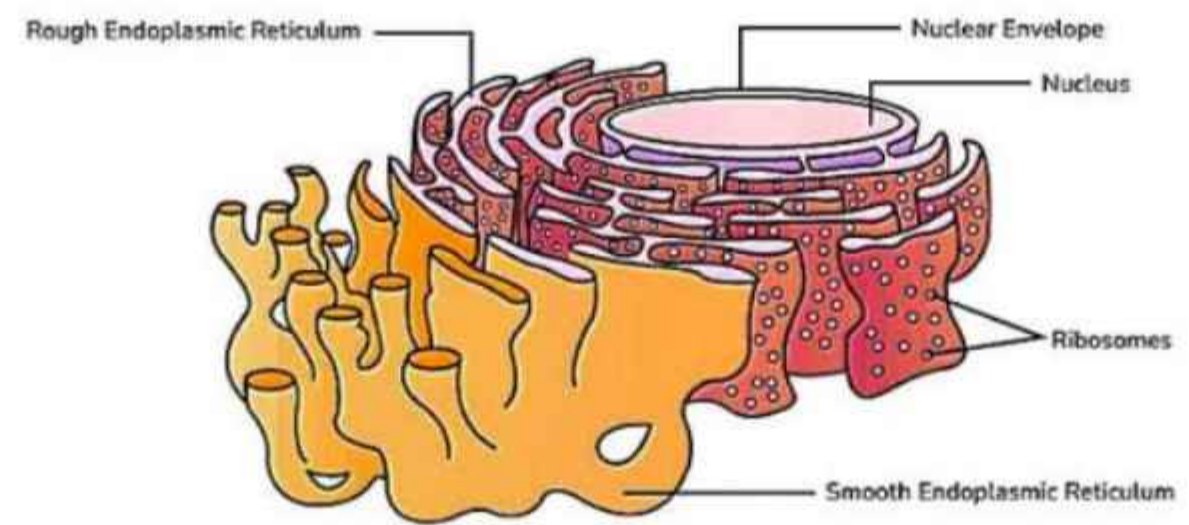
⇒ यह द्विपरतीय होती है It is Bilayered

⇒ यह अर्धपारगम्य होती है Semipermeable

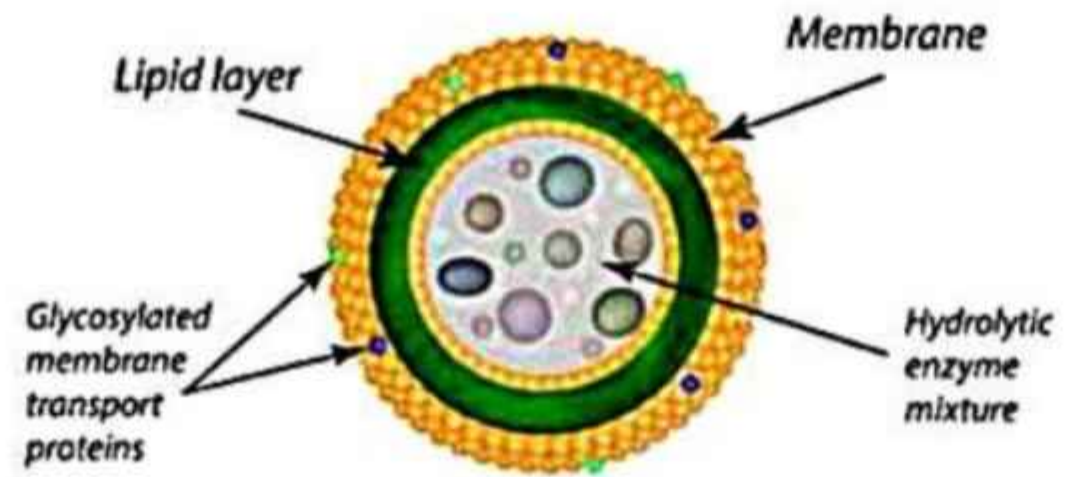


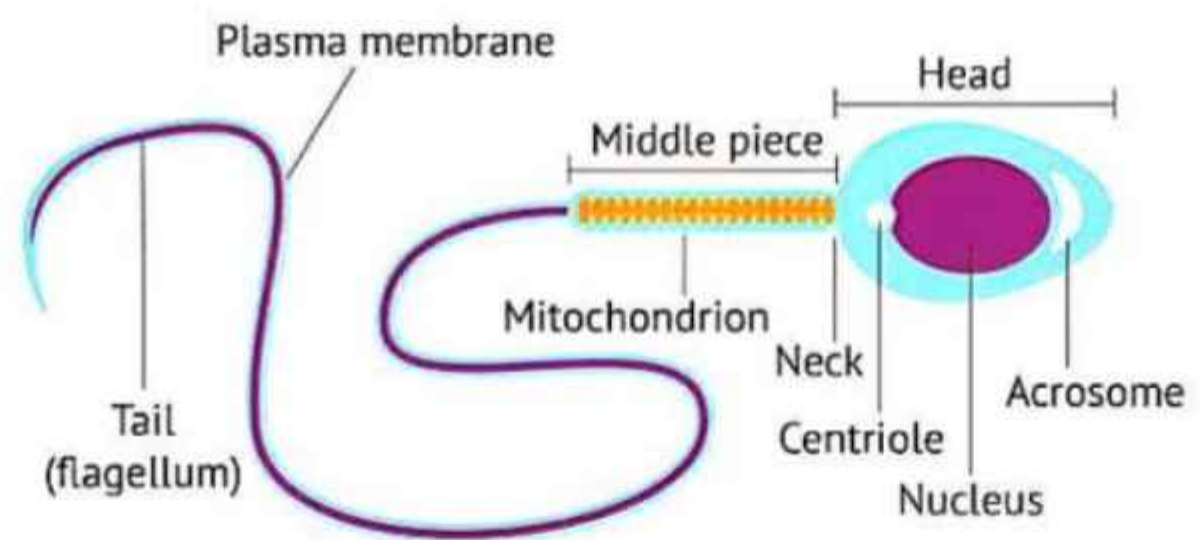


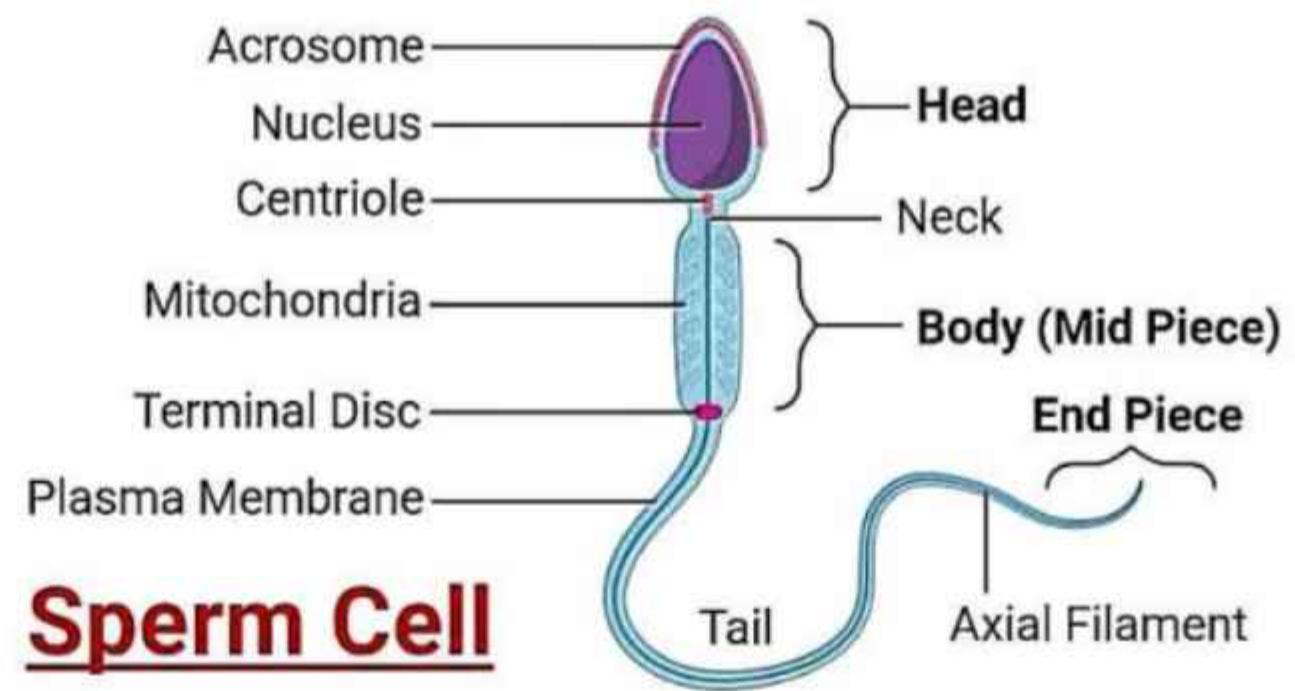




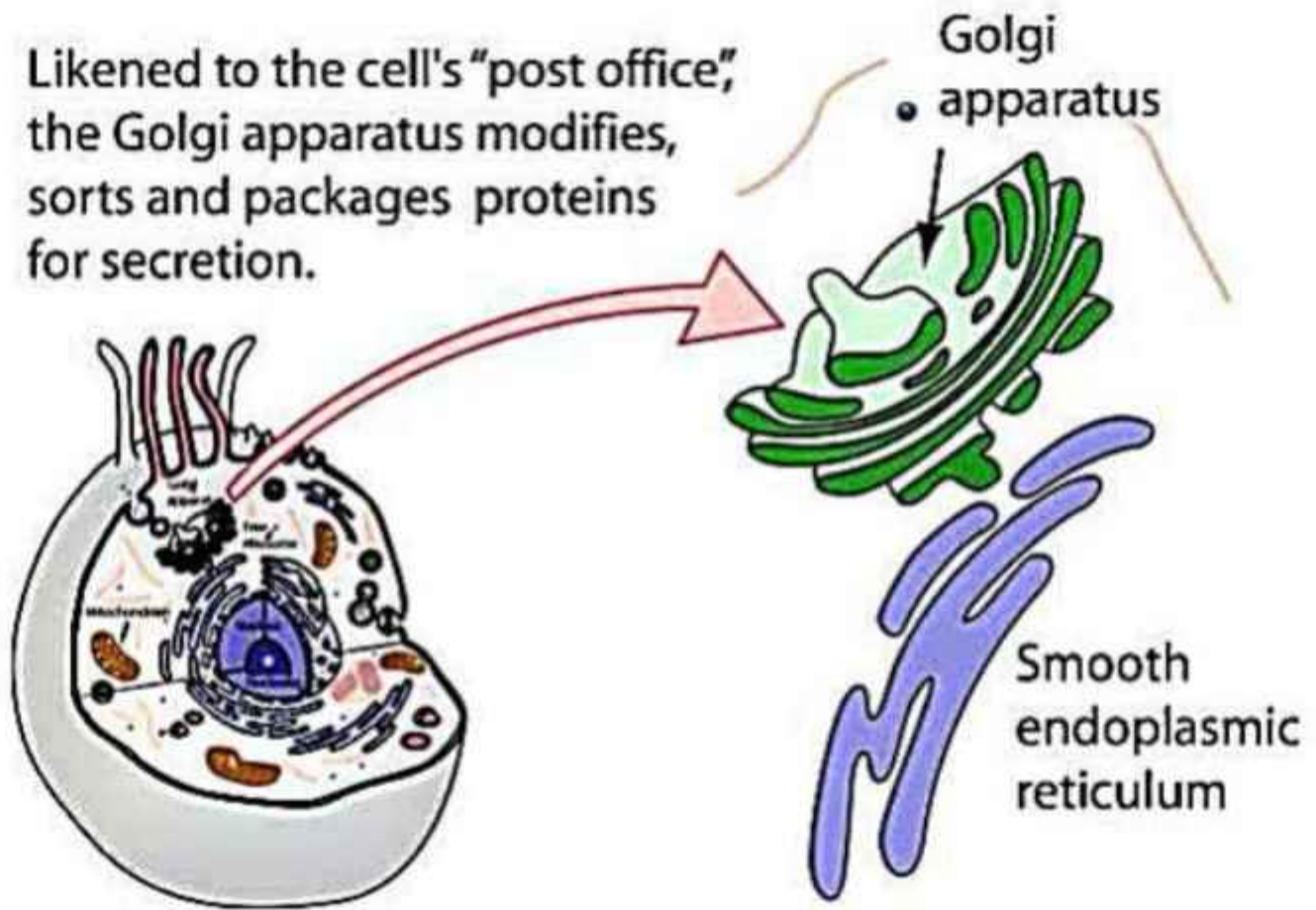
Lysosome





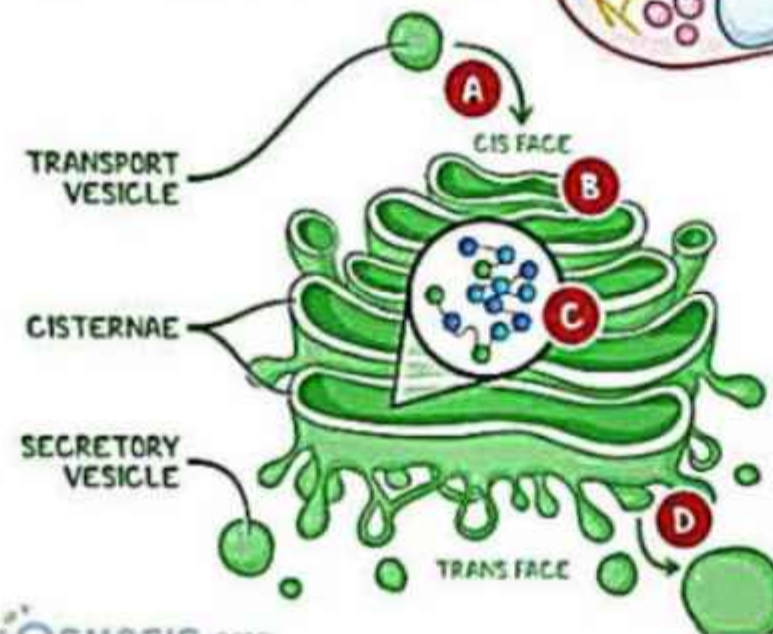
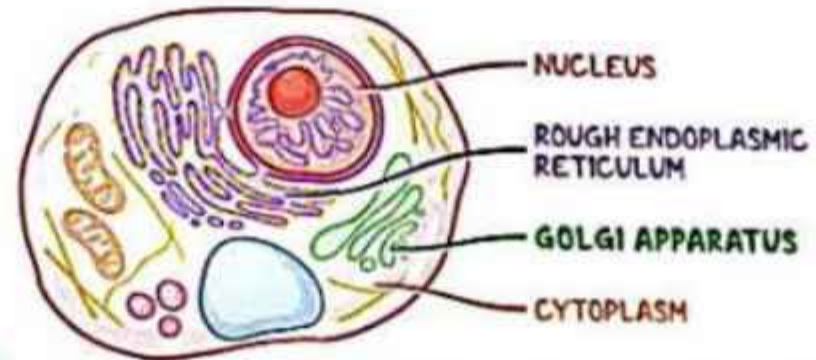


Sperm Cell



BACKGROUND

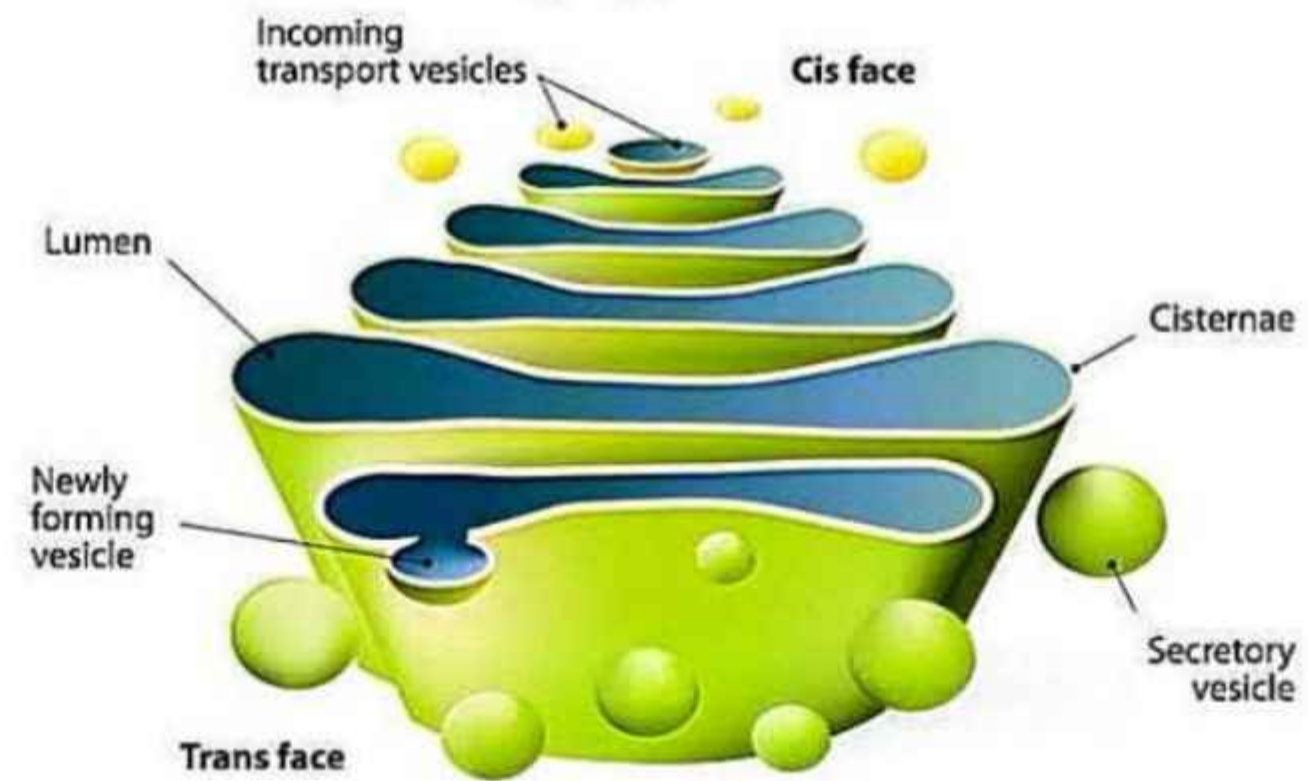
- * TYPE of ORGANELLE in EUKARYOTIC CELLS
- * PROCESSES & PACKAGES PROTEINS & LIPID MOLECULES
 - aka GOLGI BODY or COMPLEX



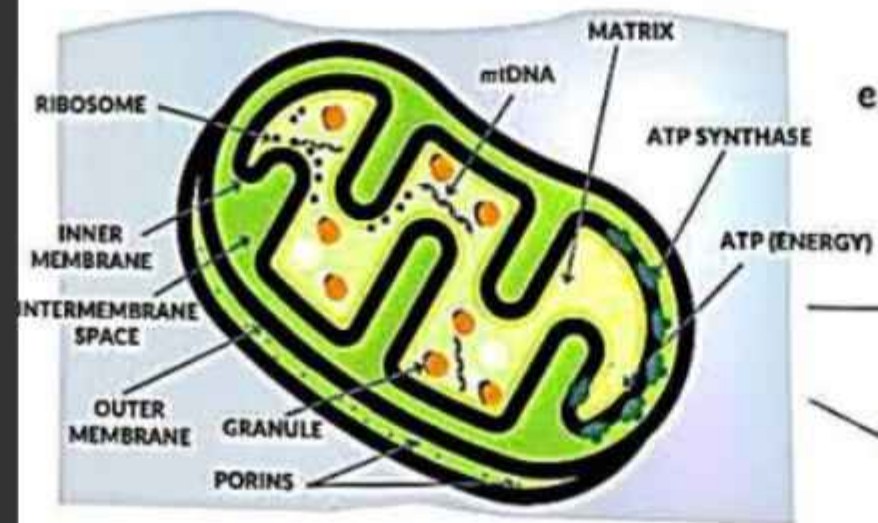
FUNCTION

- A** TRANSPORT VESICLES BRING MOLECULES from ROUGH ENDOPLASMIC RETICULUM
- B** MOLECULES FUSE with MEMBRANE & are SORTED BASED on DESTINATION
- C** MOLECULES UNDERGO REMODELING & MODIFICATIONS in CISTERNAE
- D** MODIFIED MOLECULES are SECRETED OUT of CELL or to ANOTHER ORGANELLE

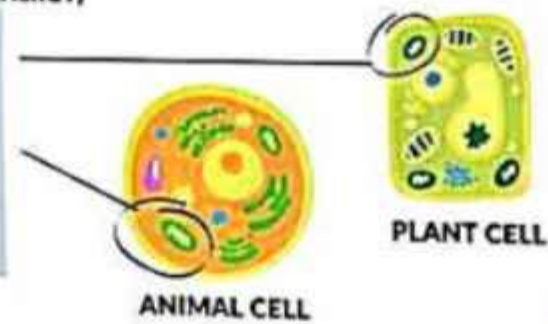
Golgi Apparatus



Mitochondrion



The mitochondrion is the organelle where chemical energy is produced through cellular respiration.

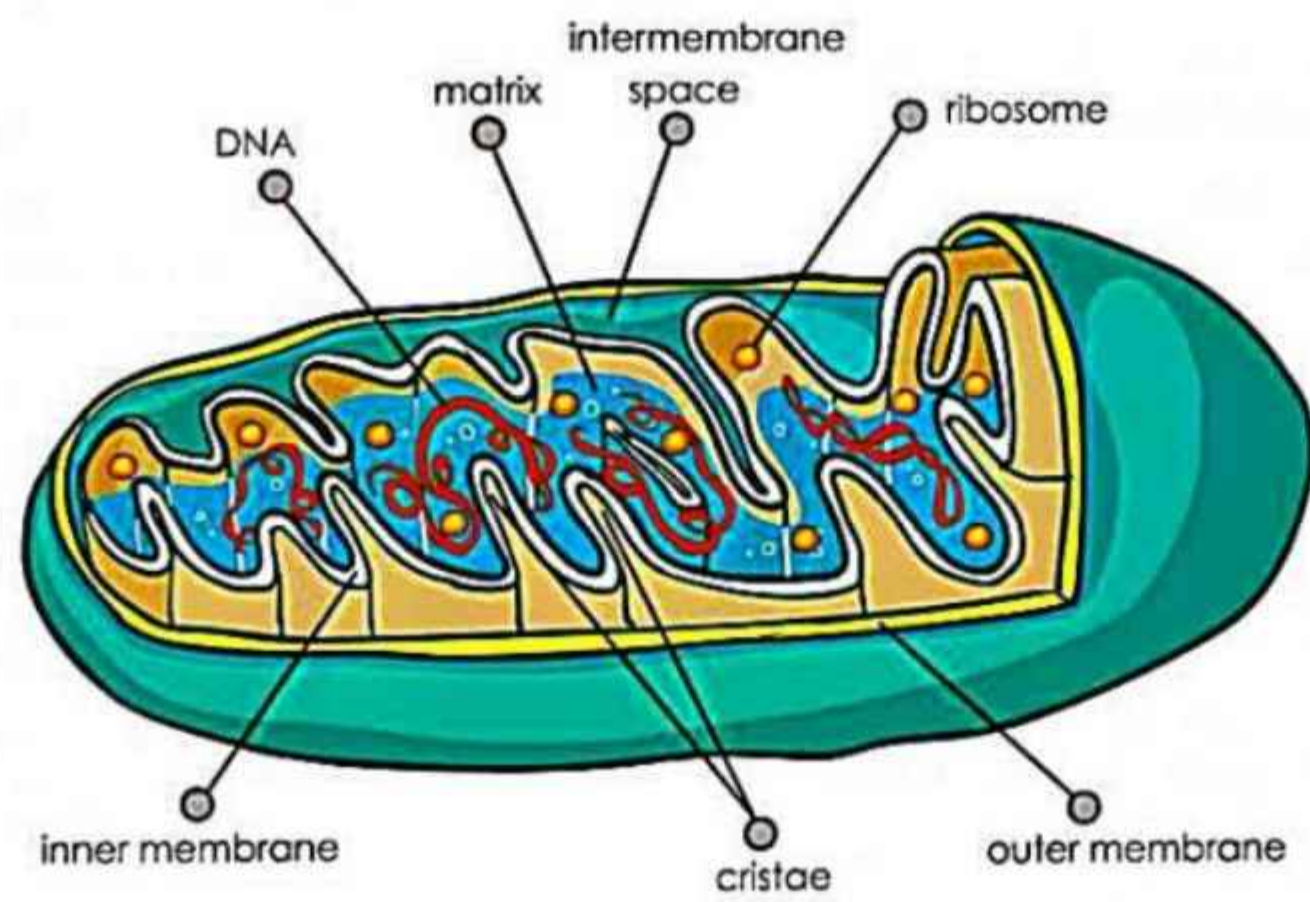


MITOCHONDRIA

“Powerhouse of the Cell”

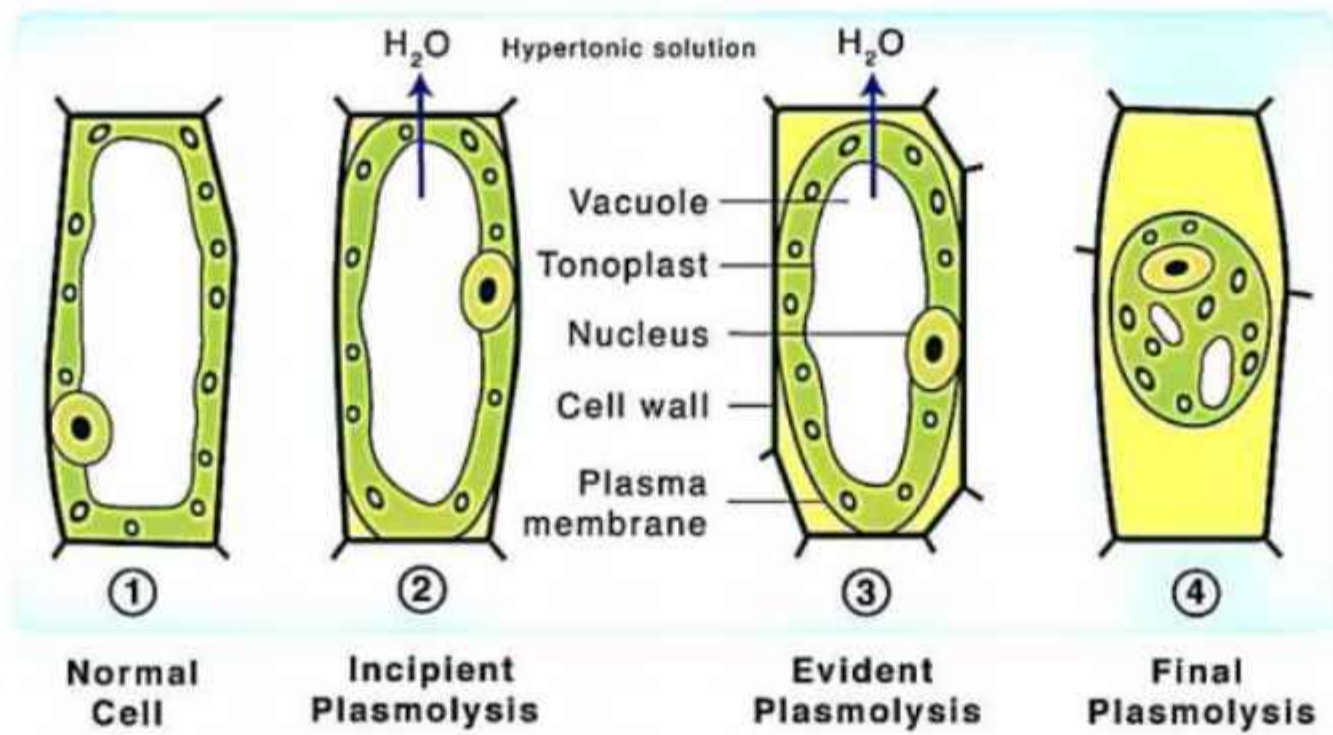
Mitochondria are eukaryotic organelles that make chemical energy via aerobic cellular respiration.

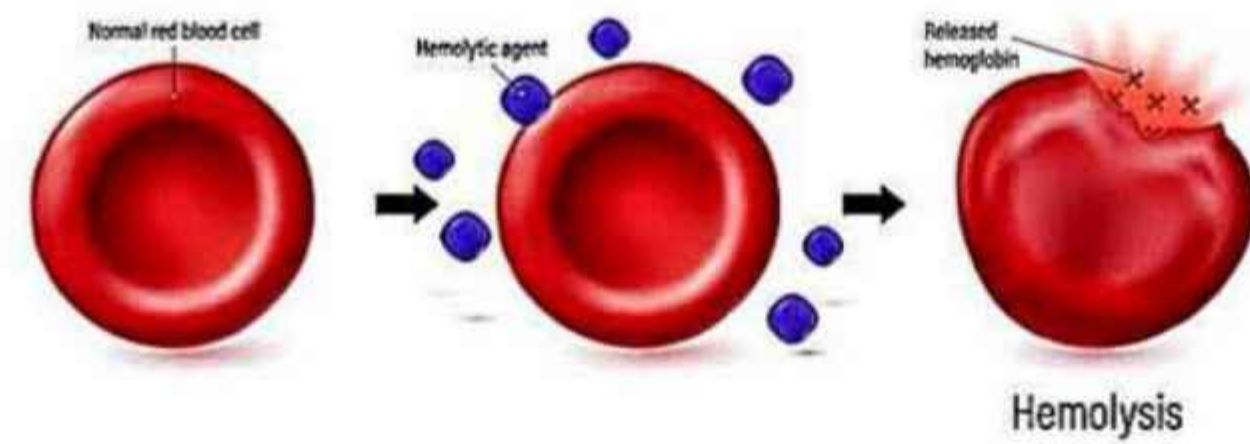




Stages of Plasmolysis

Science Facts .net





HEMOLYSIS



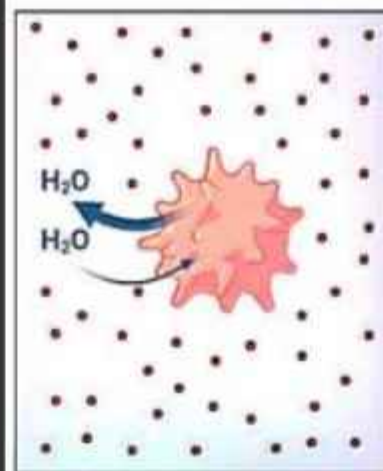
NORMAL
(healthy red
blood cell)



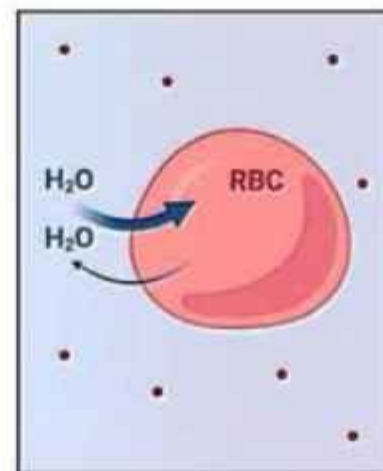
SPHEROCYTE
(sphere-shaped
red blood cell)



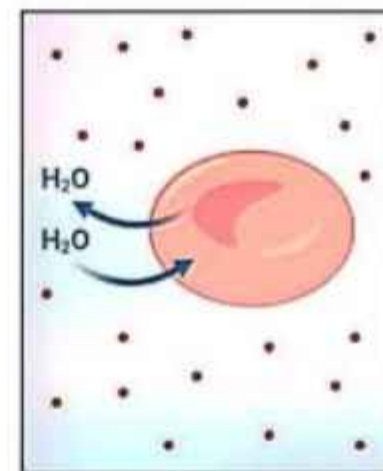
RUPTURING
(release of erythrocyte
contents into blood plasma)



Hypertonic solution

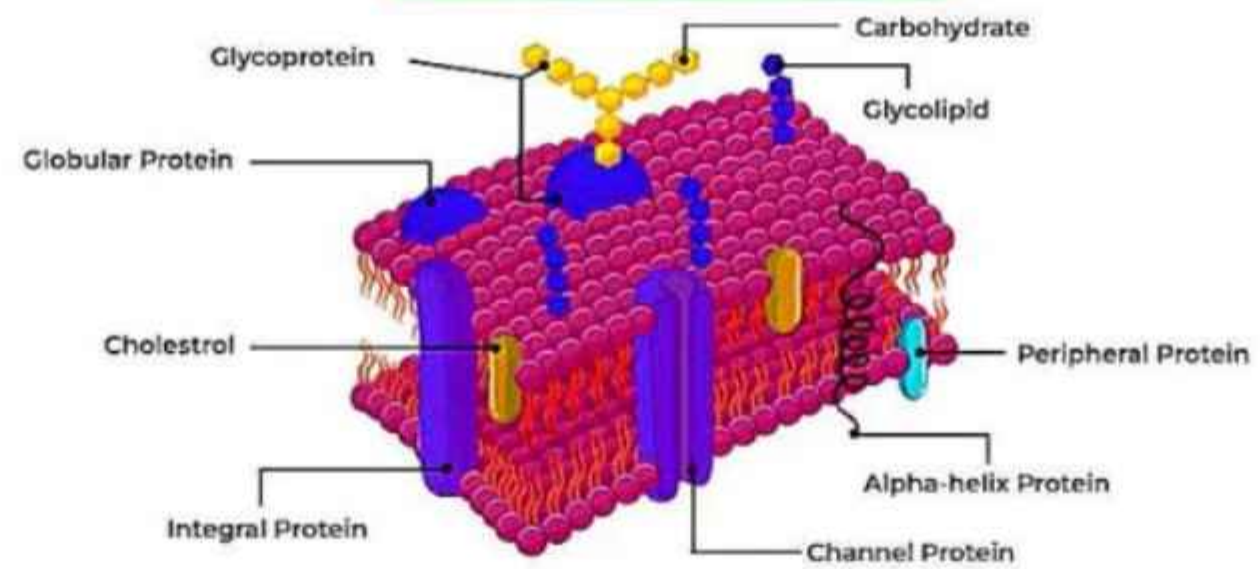


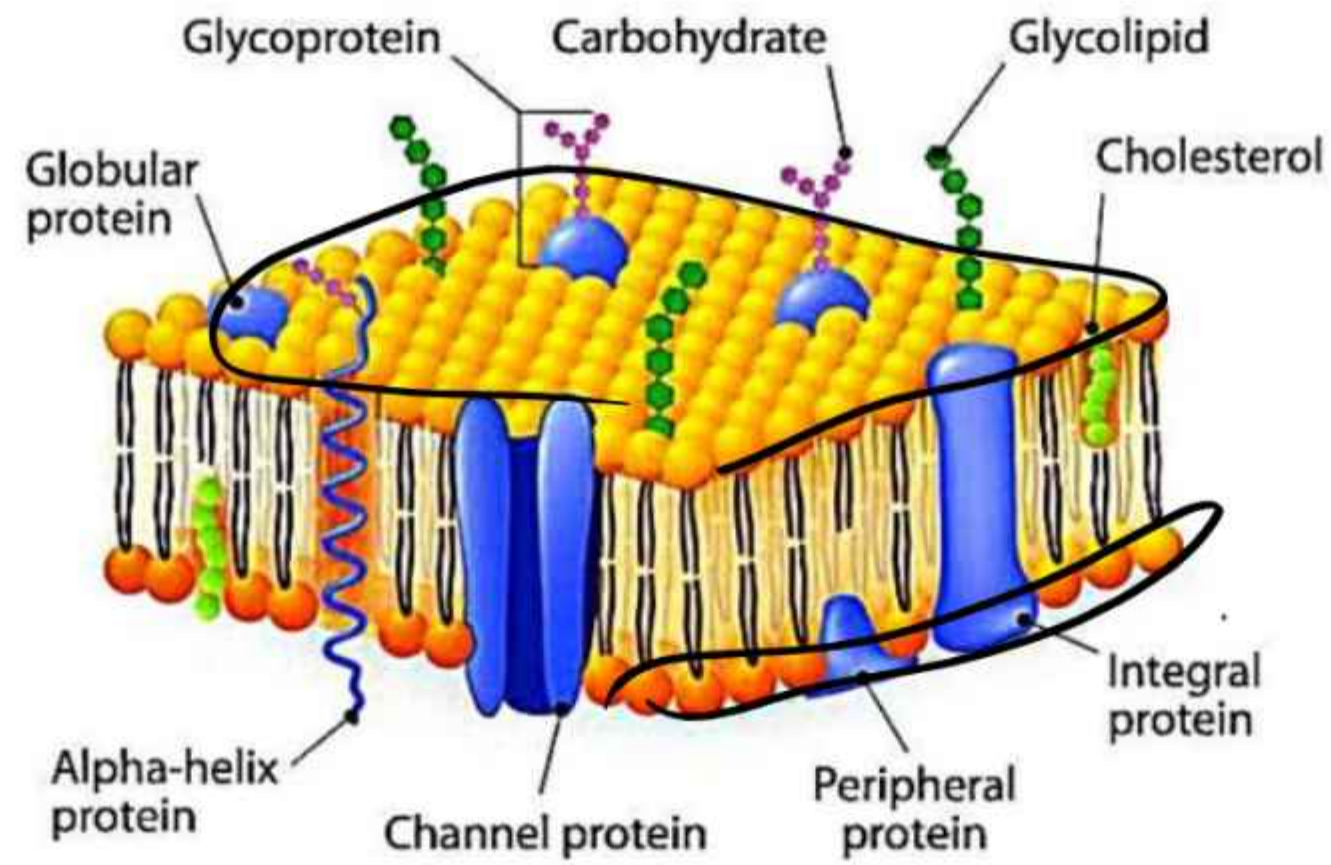
Hypotonic solution



Isotonic solution

Fluid Mosaic Model





Bacteriophage Structure

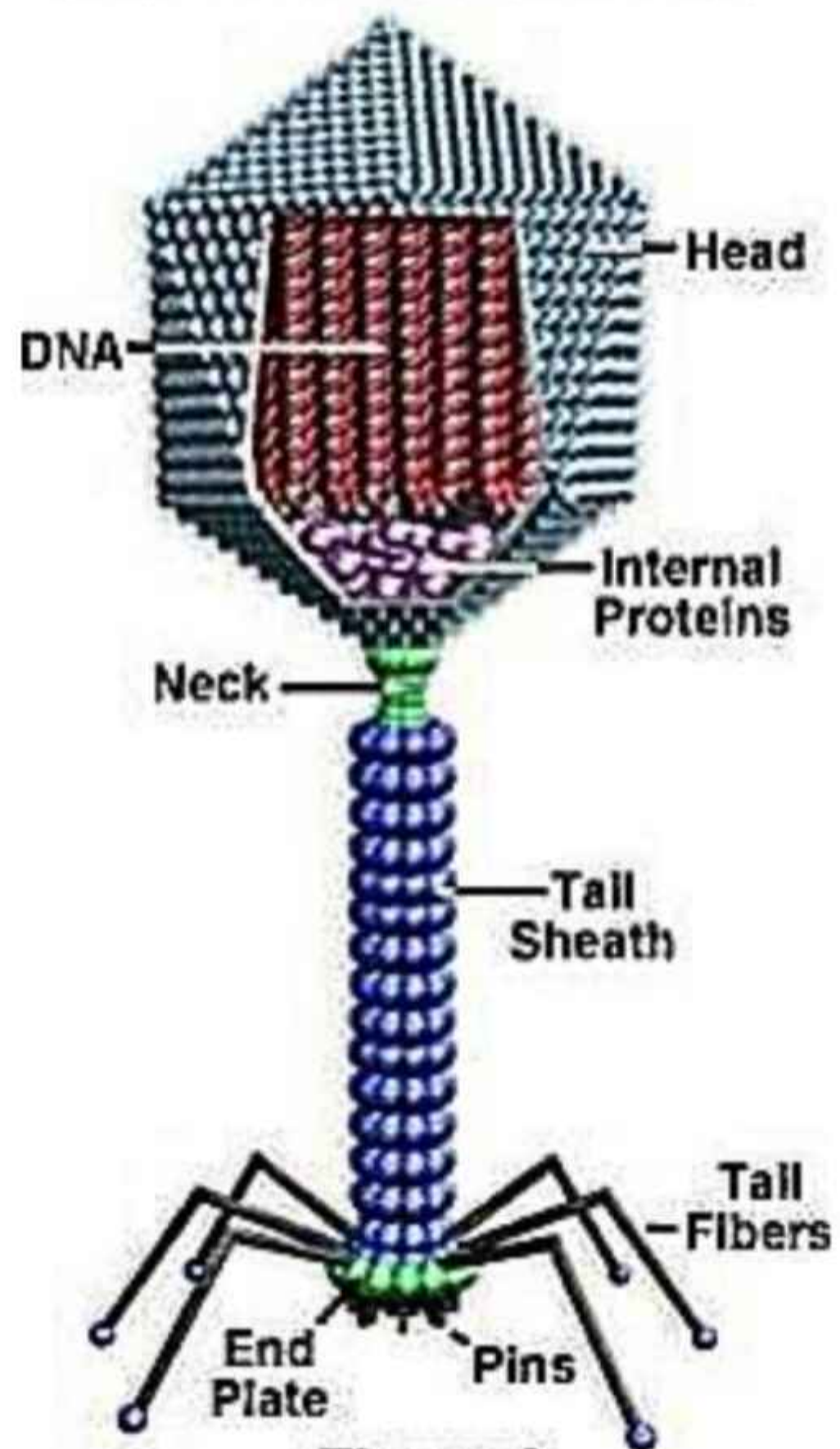
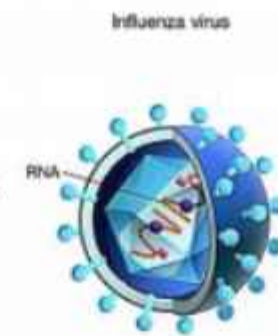
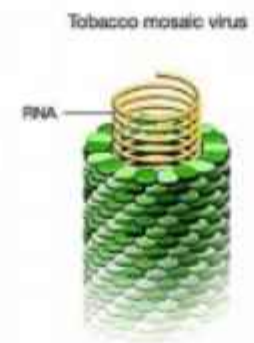
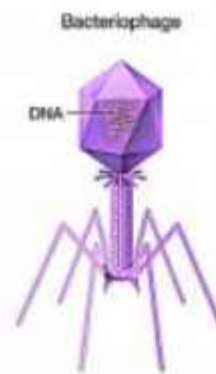
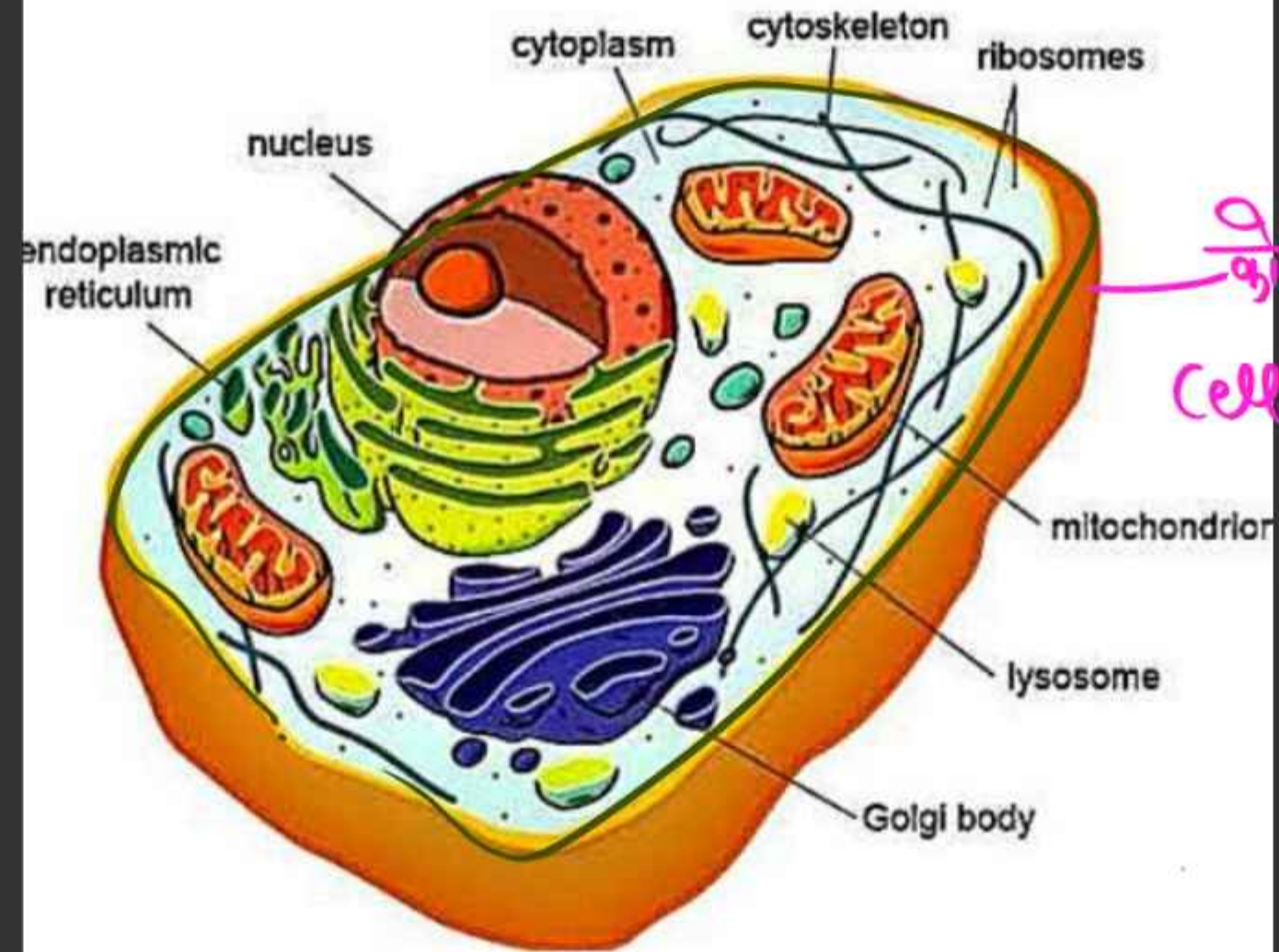


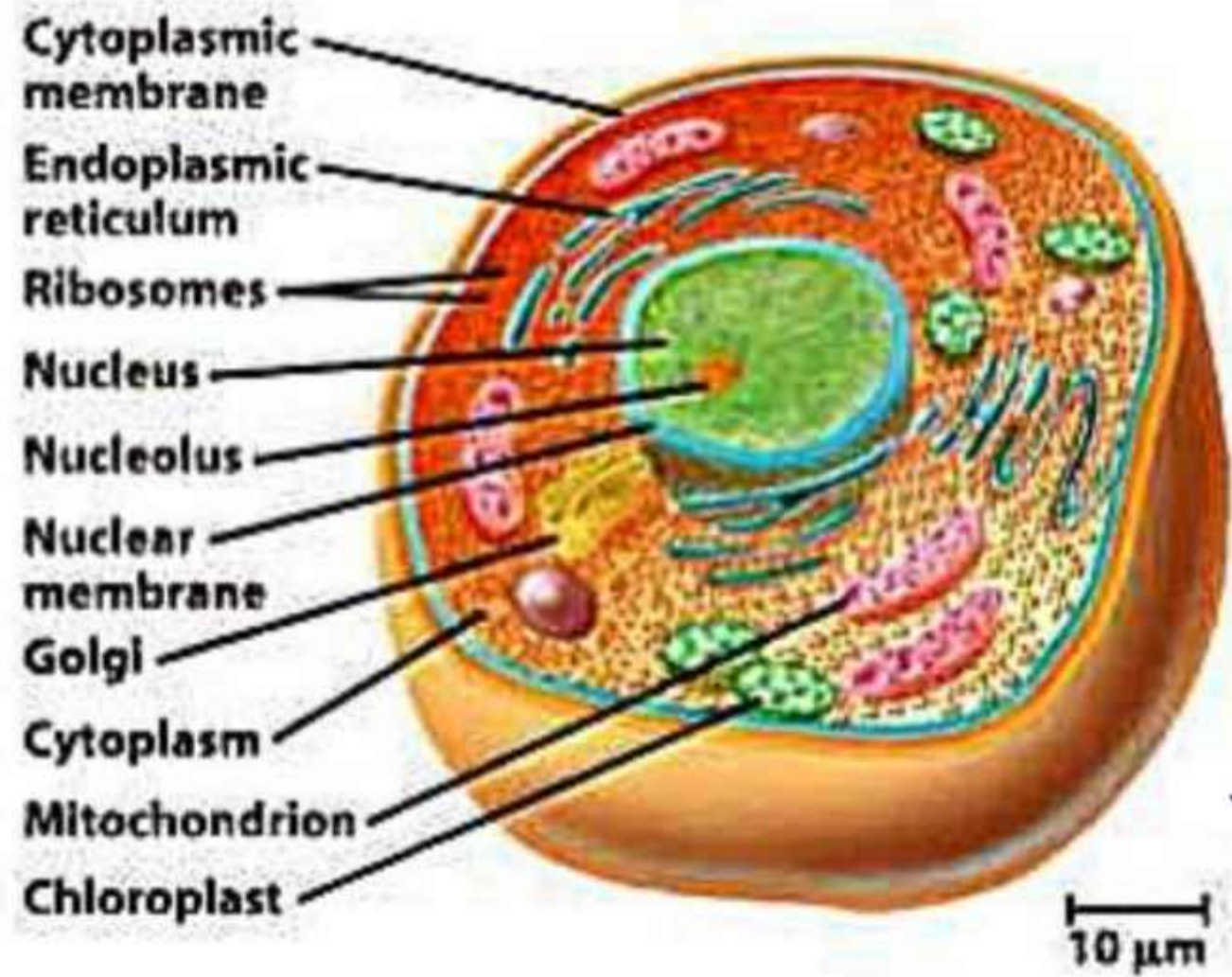
Figure 1

Examples of viruses

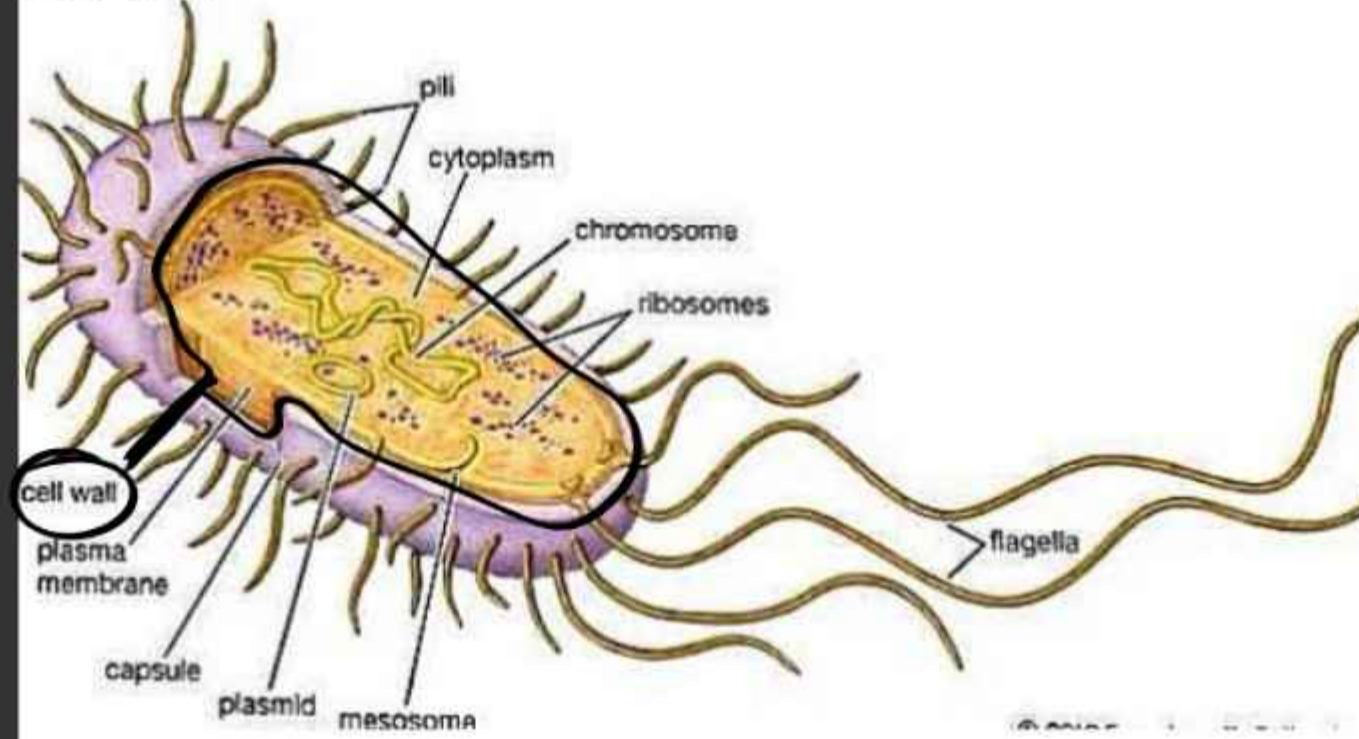


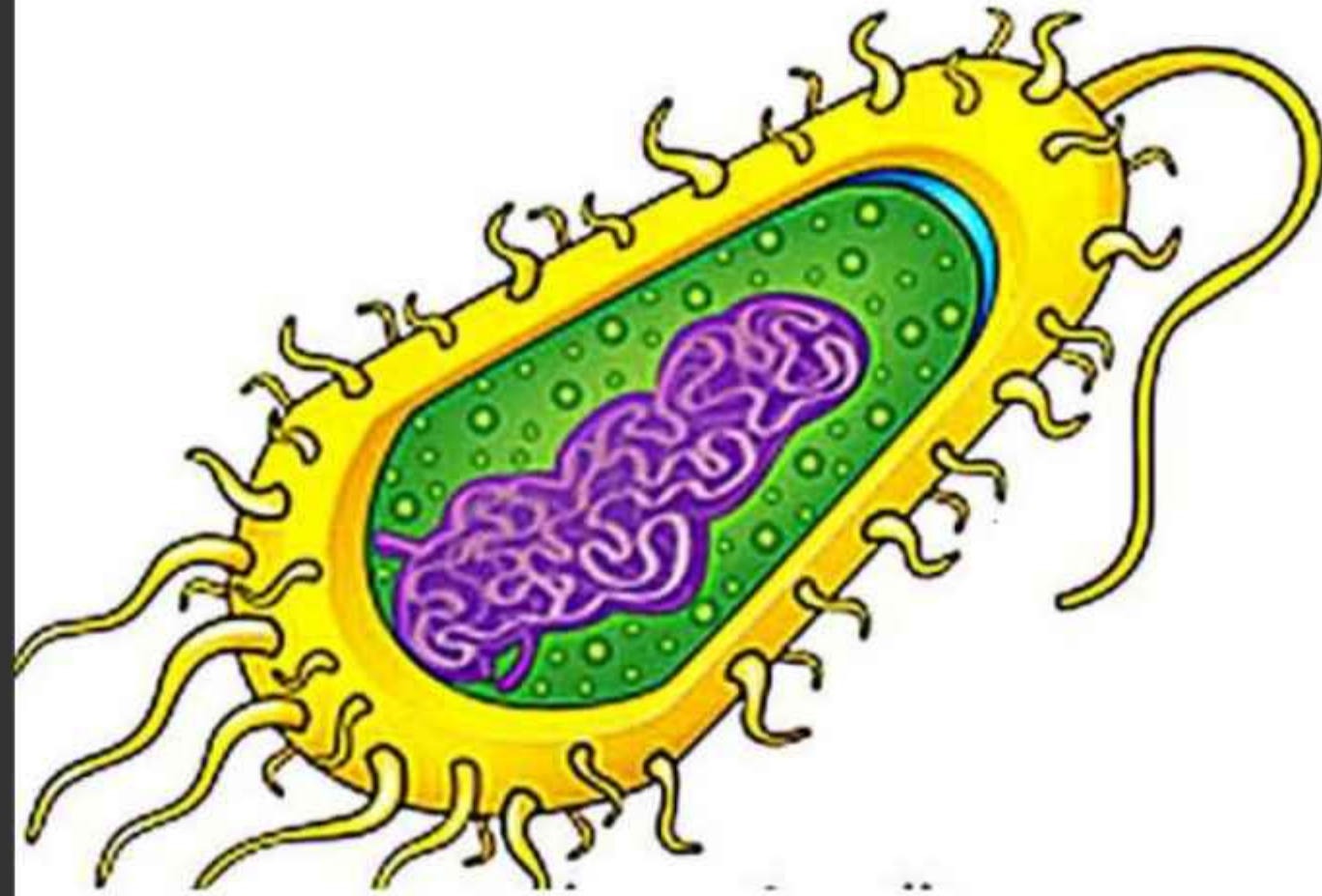


કોષકોષ્ટિક
Cell organelles



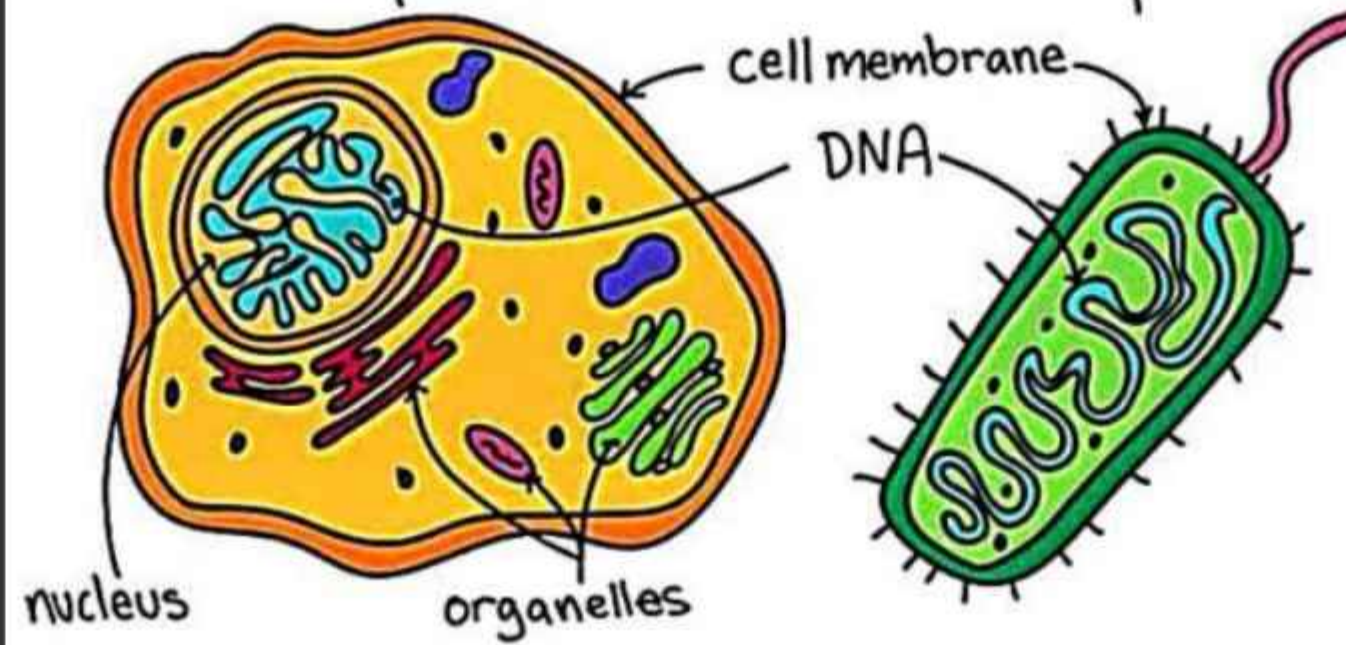
Bacterial cell



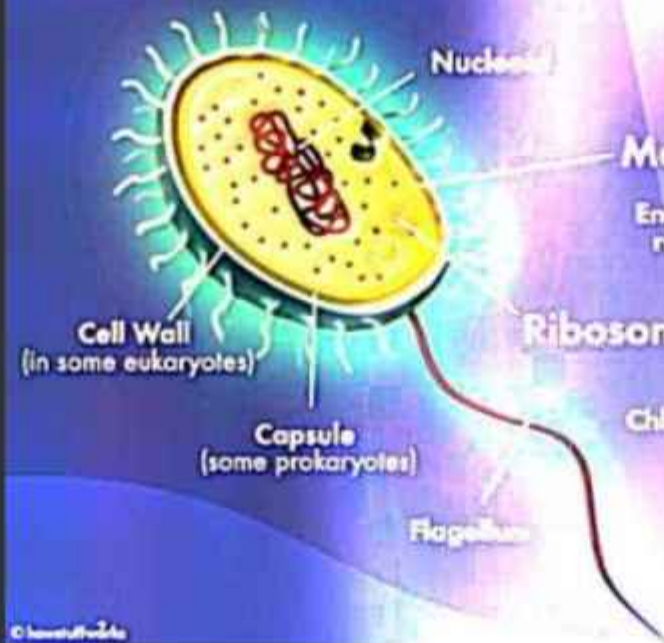


Eukaryotic

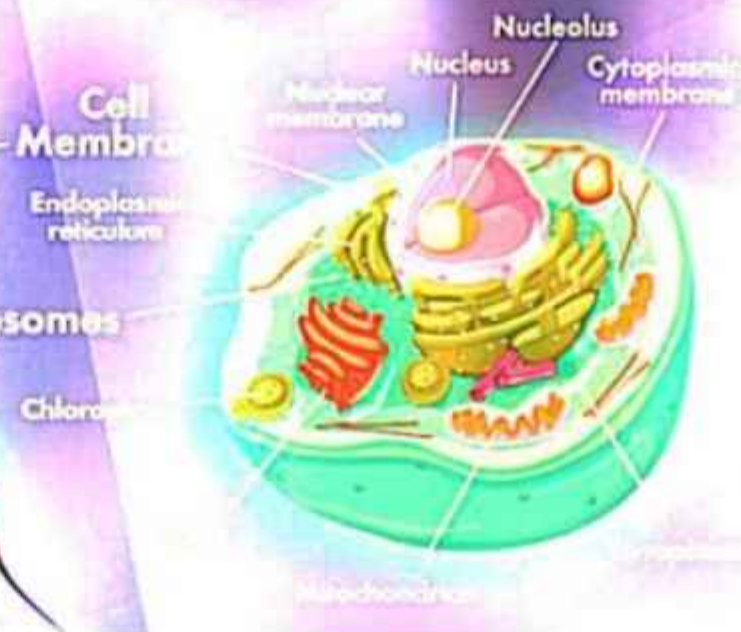
Prokaryotic



Prokaryotes



Eukaryotes



Cell Theory

The three people to discover the cell theory are:



Matthias
Schleiden



Theodor
Schwann



Rudolf
Virchow

THEORY OF CELLS

- **Matthias Schleiden (1838)**
 - All Plant Parts are Made of Cells
- **Theodore Schwann (1839)**
 - All Animal Tissues are Made of Cells
 - Wrote First two parts of *The Cell Theory*
 1. *All Organisms are made of cells*
 2. *Cell is the Basic Unit of all Living Things*
- **Rudolf Virchow (1858)**
 - 3. *All Cells Come From Existing Cells*

