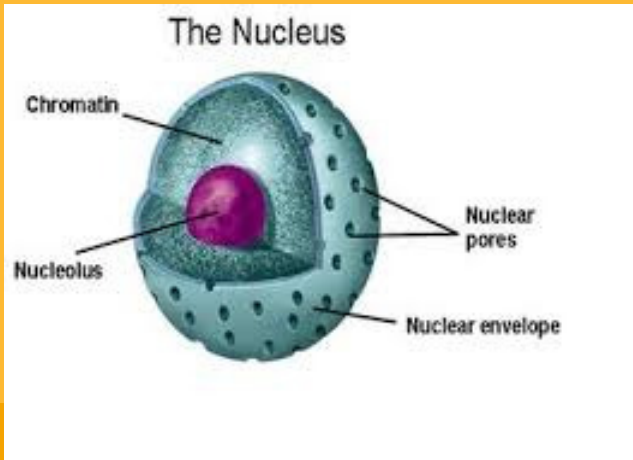


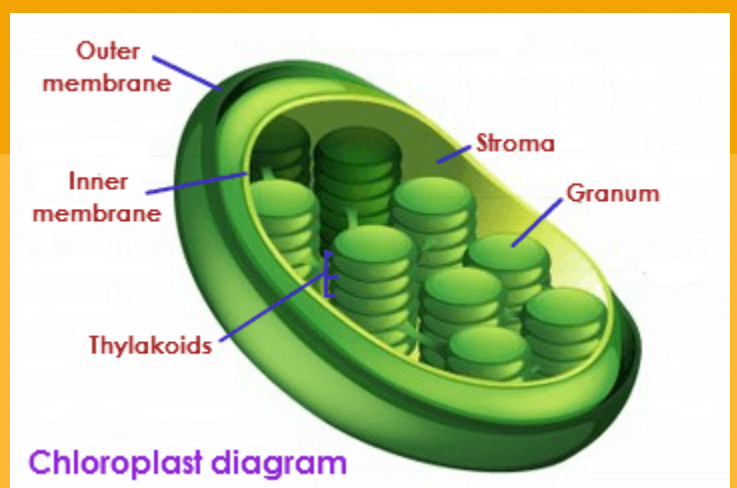
CELL PARTS

nucleus, chloroplasts and mitochondria



MOST PROMINENT FEATURE OF A EUKARYOTIC CELL

CONTROL CENTER OF THE CELL
 PROTECT THE DNA FROM THE REST OF THE CELL
 MANUFACTURE RNA AND RIBOSOMES



FOUND IN EUKARYOTIC CELLS WHICH PHOTOSYNTHESISE
 CHLOROPLAST ENVELOPE : DOUBLE MEMBRANE, CONTROLS THE ENTRY AND EXIT OF SUBSTANCES IN AND OUT OF THE CHLOROPLAST

THE STROMA : COLORLESS, GELATINOUS MATRIX WHICH CONTAINS THE ENZYMES REQUIRED FOR PHOTOSYNTHESIS

GRANA : STRUCTURES THAT LOOK LIKE A STACK OF COINS, CARRIES OUT THE LIGHT DEPENDENT STAGE OF PHOTOSYNTHESIS

STARCH GRAINS : ACT AS A TEMPORARY STORES OF THE CARBOHYDRATES THAT'S PRODUCED DURING PHOTOSYNTHESIS

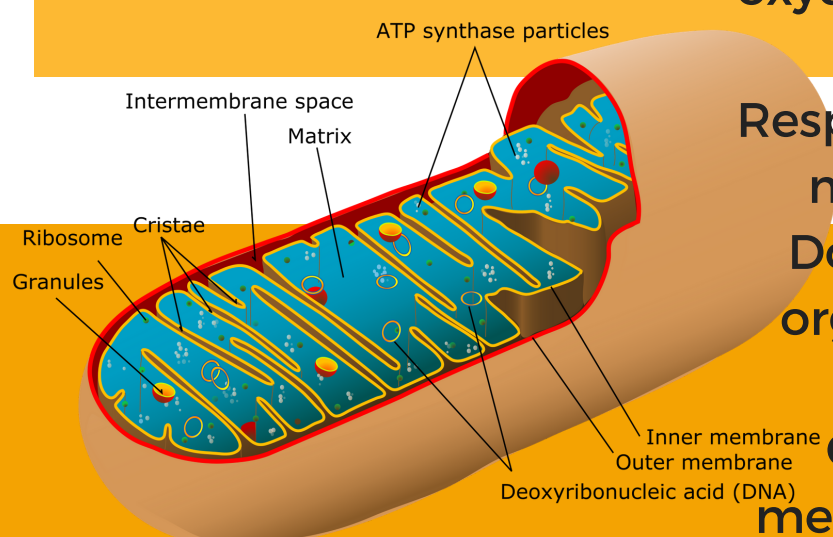
Acts as sites for the Krebs cycle and oxidative phosphorylation stages of respiration

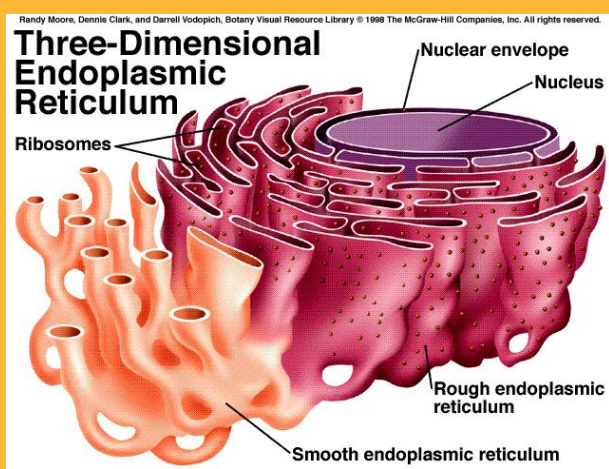
Responsible for the synthesis of ATP molecules from carbohydrates

Double membrane : around the organelle that controls the entry and exit of substances

Cristae : foldings of the inner membrane, some of which extend across the whole width of the mitochondrion

The matrix : makes up the rest of the mitochondria

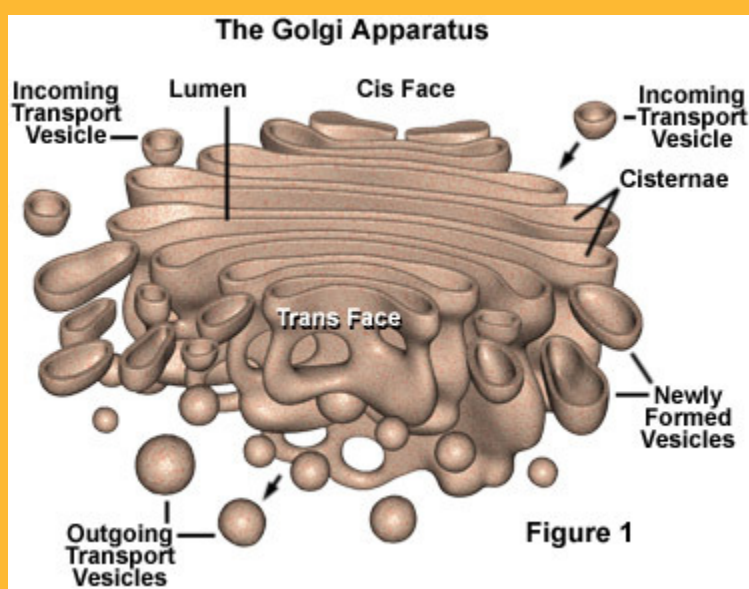
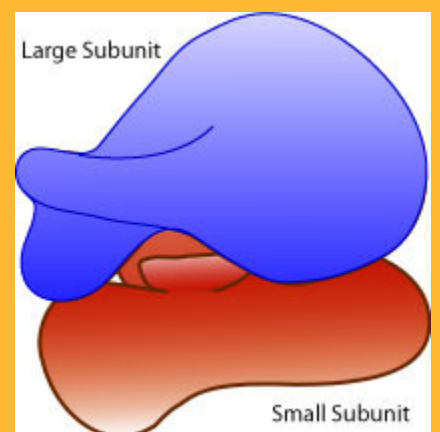




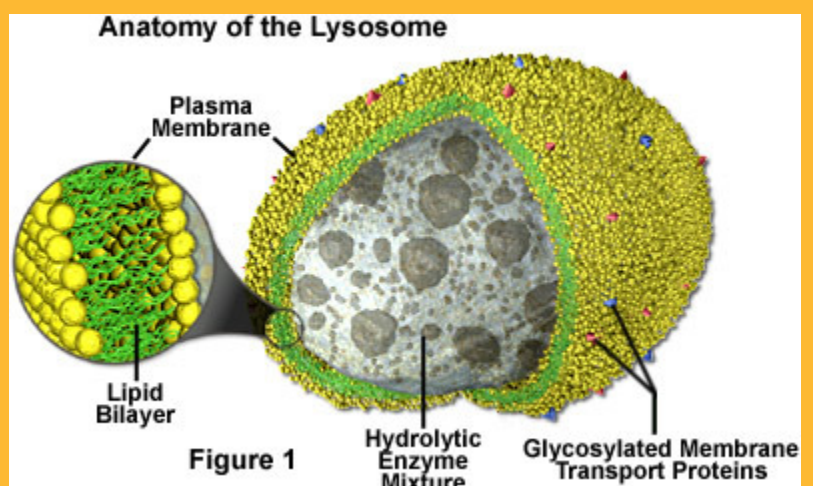
Two types:

- . Rought endoplasmic reticulum (RER):**
has ribosomes;
- . Smooth endoplasmic reticulum (SER) :**
lacks ribosomes;
- Functions:**
- . Large surface of area for the synthesis of protein;**
- . Pathway for the transportation of materials;**
- . Syntesises, stores and transpor lipids;**
- . Synthesises gltcoген (sometimes);**
- . Forms transport vesicles;**

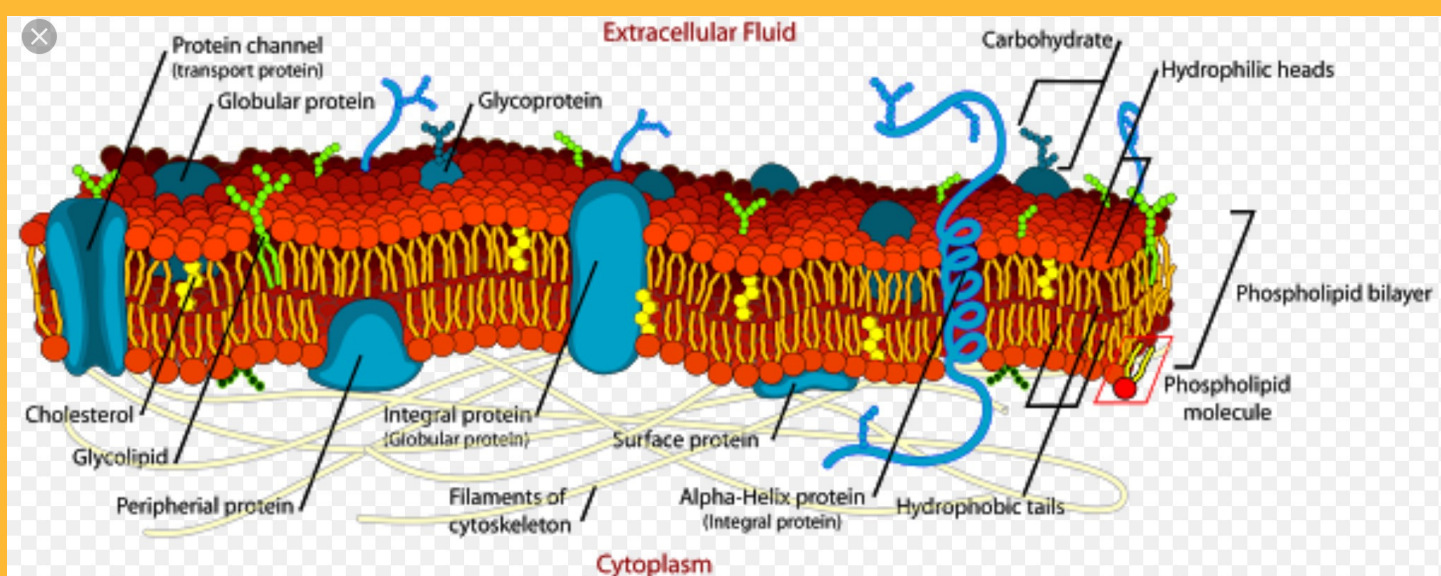
- . Small spherical structure (all cells)**
- . Cytoplasm and RER**
- . Two sub- units**



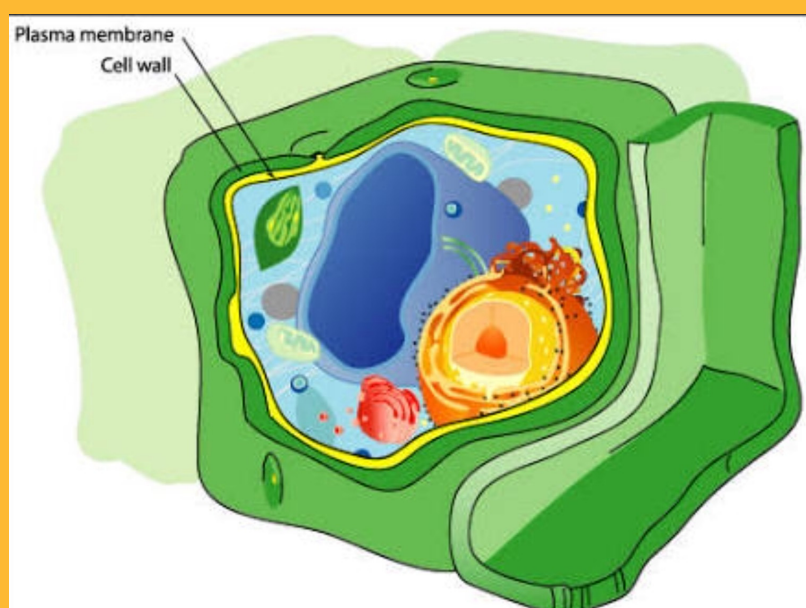
- . Eukaryotic cells and its similar to SER in structure ;**
- . Cisternae, a d associated hollow vesicles**
- . Proteins and lipids produced by the ER and labels them**
- . Adds carbohydrates to proteins to form glycoproteins**
- . produces secretary enzymes such as those secreted by the pancreas**
- . Secretes carbohydrates such as those secreted by the pancreas**



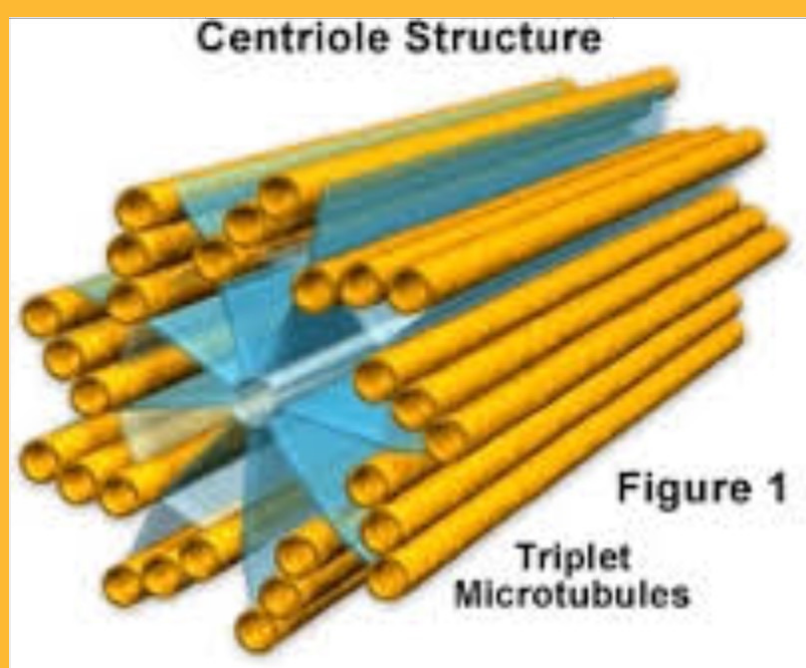
- Lysosomes are bound by a single membrane and are formed when the vesicles produced by the Golgi body include within them enzymes such as proteases and lipases**
- . Break down material ingested by phagocytic cells such as macrophages and neutrophils**
- . digest worn out organelles so that the useful chemicals of which they are made can be re-used**
- . completely break down cells after they have died**
- . some lysosomes have a role in releasing hydrolytic enzymes to the outside of the cell to destroy material around the cell**



In animals cells
 Define the cell and enclose the cell
 content
 Boundary between the cell cytoplasm
 and the environment



Characteristic of all plant cells
 Consists of a number of
 polysaccharides (such as cellulose) +
 other polysaccharides (such as
 hemicellulose and pectin)



In almost all animals cells and in the
 cells of certain algac and fungi but not
 in plant cells of higher plants
 They are hollow cylinders made up of
 9 sets of 3 microtubules