

Cell Organelles and Their Functions

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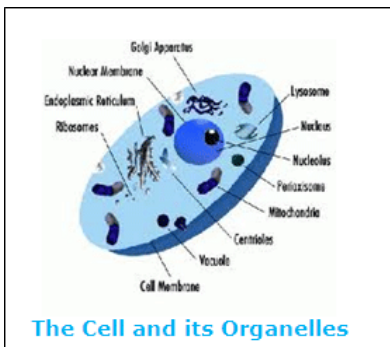
Cell Organelles-A Detailed Study

A cell organelle present within a cell and each organelle hold a specific function. These are present in eukaryotic cells. Prokaryotic organisms like lack a nucleus and other genetic matter within the cells. Lets discuss the organelles and its unique functions.



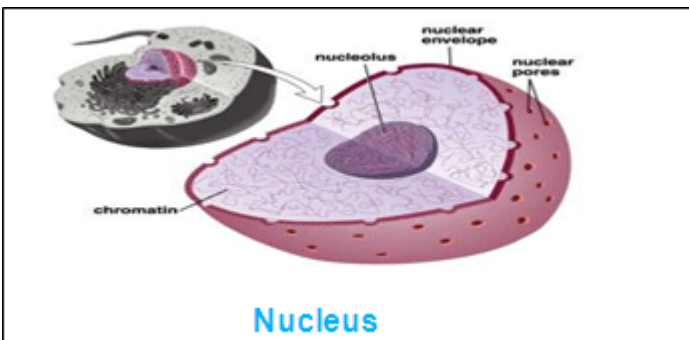
Cell Organelles

The cell membrane contains a nucleus, and filled with cytoplasm, which holds all the organelles.



Nucleus

It is the 'brain' of the cell. Nucleus control all other activities the cell. The nucleus has a nuclear membrane, chromatins and a nucleolus, it also contains he important genetic material - the chromosomes. There may be one or more nuclei in a cell but lack in prokaryotic cells.



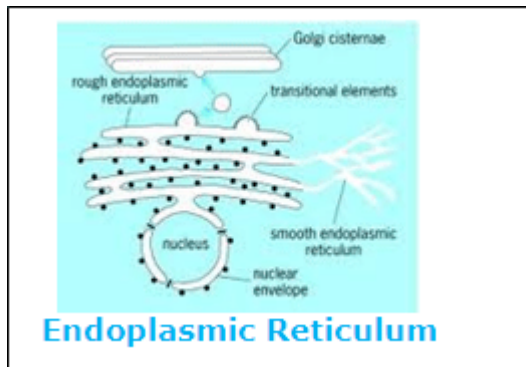
Cell Membrane

Provides the structure and shape to the cell and has the responsibility for holding all the cell organelles together. Protecting the cell is its major job and with the selectively permeable membrane it controls the materials move in and outside of the cell.

Endoplasmic Reticulum

It looks like a network and transports material from one part to another part of the cell. It has two types of endoplasmic reticulum: RER and SER.

- RER is the Rough endoplasmic reticulum (attached with ribosomes)
- SER is the Smooth Endoplasmic Reticulum (no ribosomes).

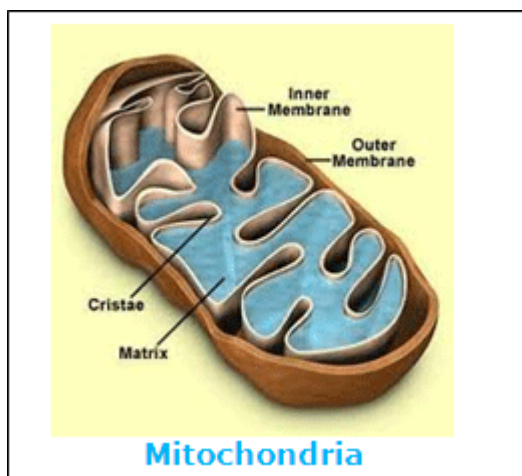


Ribosome

Ribosomes are made of RNA and protein enzymes and it helps protein synthesis process.

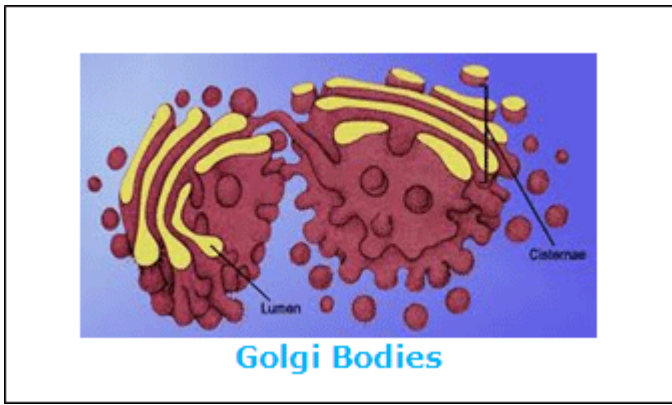
Mitochondria

It is known as the 'Powerhouse' of the cell. It is made up of a double layered membrane, the inner part of which consists of folds, called cristae which help for the breakdown of sugar molecules. The energy released through this process stored in the form of ATP.



Golgi Apparatus

It is made up of numerous layers which form a sac like structure and helps for the protein packaging and its distribution to other parts of the cell.



Centrioles

Centrioles lie near the nucleus and are made up of nine tube like structures, each of which has three tubules. It releases the spindle fibres which attach with chromosomes during the cell division.



Lysosomes

Lysosome structure has enzymes. It helps for the breakdown of larger molecules into small parts, also responsible for the transport of waste out of the cell.

Vacuoles

Vacuoles store food and water and provide turgor pressure against the cell walls.

Organelles and their Functions in a Plant Cell

Plant and animal cells differ in some aspects.

Chloroplasts

Chloroplasts are the small oval structure organelle contains chlorophyll. It plays an important role in the photosynthesis process.

Cell Wall

Cell wall made up of cellulose and it gives support to the cell.

Peroxisomes

These are types of microbodies found in cells, roughly spherical in shape, and have enzymes responsible for degradation.

Cell Membrane

The cell membrane surrounds all living cells. It controls the movement of materials in and out of the cell. These are composed of phospholipids, proteins and carbohydrates arranged in a fluid mosaic structure.

Do you know the important functions of Cell membrane?

Want to know more about the “Cell organelles”? [Click here](#) to schedule live help from a certified tutor!

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Reference Links

- http://en.wikipedia.org/wiki/Cell_membrane
- http://en.wikipedia.org/wiki/Cell_nucleus
- <http://en.wikipedia.org/wiki/Organelle>
- http://en.wikipedia.org/wiki/Golgi_apparatus

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