



Department of biology

GENERAL BOTANY

Lab 1

Stage -1-

The Plant Cell Part 1

By

MSc. Zainab Nadhum Aziz

PLANT CELL DEFINITION

Plant cells are eukaryotic cells with a true nucleus along with specialized structures called organelles that carry out certain specific functions

WHAT IS A PLANT CELL?

Plant cells are eukaryotic cells that vary in several fundamental factors from other eukaryotic organisms. Both plant and animal cells contain nucleus along with similar organelles. One of the distinctive aspects of a plant cell is the presence of a cell wall outside the cell membrane.

PLANT CELL STRUCTURE

Cell Wall

It is a rigid layer which is composed of cellulose, glycoproteins, lignin, pectin, and hemicellulose. It is located outside the cell membrane. It comprises proteins, polysaccharides, and cellulose. The primary function of the cell wall is to protect and provide structural support to the cell.

CELL MEMBRANE

It is the semi-permeable membrane that is present within the cell wall. It is composed of a thin layer of protein and fat. The cell membrane plays an important role in regulating the entry and exit of specific substances within the cell. For instance, cell membrane keeps toxins from entering inside.

NUCLEUS

The nucleus is a membrane-bound structure that is present only in eukaryotic cells. The vital function of a nucleus is to store DNA or hereditary information required for cell division, metabolism, and growth.

Nucleolus

**It manufactures cell's
protein-producing
structures and
ribosomes**

Nucleopore

**Nuclear membrane is
perforated with
holes called
nucleopore that
allows**

