Biology: Cell Structure I Nucleus Medical Media

Nucleus Medical Media

Understanding Cells: The Smallest Living Units

Cells are the smallest living units of an organism. They come in different types, but they share three common traits:

- They have a cell membrane that separates the inside of the cell from its environment
- They have DNA, which contains the genetic information that directs the cell's activities
- They have cytoplasm, a jelly-like substance that fills the cell and contains various organelles

The cell contains two main components: cytoplasm and DNA. The cytoplasm is a jelly-like fluid that fills the cell and provides a medium for the cell's organelles to function. The DNA, or genetic material, is located within the nucleus and contains the instructions for the cell's growth and reproduction.

The genetic material of a cell is contained within its nucleus. There are two types of cells: eukaryotic and prokaryotic. Eukaryotic cells are more advanced and complex, with organelles such as the nucleus and specialized structures. Prokaryotic cells, on the other hand, lack a nucleus or membrane-enclosed organelles, but still have genetic material.

Prokaryotic cells, such as bacteria, are unicellular organisms that do not have a nucleus. Organelles, which are the specialized parts of a cell with unique functions, are not present in prokaryotic cells.

However, eukaryotic cells, which are found in plants, animals, and fungi, have a nucleus that serves as the control center of the cell. The nucleus contains DNA or genetic material, which directs the activities of the cell. Organelles, such as mitochondria, ribosomes, and the endoplasmic reticulum, perform specific tasks in the cell.