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The cytoplasm is the part of protoplasm , in a eukaryotic cell , is located between the cell nucleus and the plasma membrane . a consists of an emulsion colloidal fine grained aspect, the cytosol or hyaloplasm , and in a variety of cellular organelles that perform different functions.

Its function is to host cell organelles and contribute to the movement of these. The cytosol is home to many of the processes metabolism that occur in cells.

The cytoplasm is divided sometimes in a gelatinous outer region, close to the membrane and involved in cell movement, called ectoplasm , and a smoother inner portion which is called endoplasm and where they are most organelles . The cytoplasm is found in prokaryotes and in eukaryotes and in it are several nutrients that were able to cross the plasma membrane, thereby arriving at the cell organelles.

The cytoplasm of eukaryotic cells is divided by a network of membranes (smooth endoplasmic reticulum and rough endoplasmic reticulum) that serve as a work surface for many of its activities biochemical .

The rough endoplasmic reticulum is present in all eukaryotic cells (absent in prokaryotes) and predominates in those who make large amounts of protein for export. Is continuous with the outer membrane of the nuclear envelope , which also has ribosomes attached.

In the cytoplasm there is a network of filament protein, giving it shape and internal organization of the cell and allow its motion. 5 These filaments called the cytoskeleton . There are several types of filaments:

Microfilament or filaments of actin , typical of muscle cells.

Microtubule , which dispersed in the hyaloplasm or form more complex structures such as the spindle apparatus .

Intermediate filaments and the filaments of keratin typical of epidermal cells .

In turn, these structures have a relationship with the proteins , and cause other more complex structures and stable. They are also responsible for the movement cytology .

The intracellular medium comprises a liquid solution called hyaloplasm or cytosol. The organelles are contained within a cytoplasmic matrix . This matrix is called cytosol, or hyaloplasm. Is a material which is an aqueous solution or suspension of biomolecules vital cells. Many biochemical processes, including glycolysis , occur in the cytosol.

In a eukaryotic cell, can occupy between 50% to 80% of the volume of the cell. Comprises approximately 70% of water while the rest of its components are molecules that form a colloidal solution. These molecules are usually macromolecules .

Being a watery fluid, the cytosol lacks stable form or structure, although temporarily, you can purchase two types of forms:

One way the consistency of gel

The sunshine state of fluid consistency.

Changes in the shape of cytosol are due to temporary needs of the cell with respect to the metabolism , and plays an important role in cell locomotion .

The cytoplasm consists of organelles (or "organelles") with different functions. Among the most important organelles are the ribosomes , the vacuoles and mitochondria . Each organelle has a specific function in the cell and the cytoplasm. The cytoplasm has a portion of the genome of the organism . Although most are in the nucleus , some organelles, including mitochondria or chloroplasts , possess a certain amount of DNA .

Ribosomes are granules cytoplasmic found in all cells, and measure about 20 nm . Carriers are also of ribosomal RNA .

Protein synthesis takes place on ribosomes in the cytoplasm. 8 The messenger RNA (mRNA) and transfer RNA (tRNA) was synthesized in the core , and then transmitted to the cytoplasm as independent molecules. The ribosomal RNA (rRNA) enters the cytoplasm as a ribosomal subunit. Since there are two types of subunits in the cytoplasm bind the two subunits with mRNA molecules to form complete ribosomes assets. 9

Active ribosomes may be suspended in the cytoplasm or bound to rough endoplasmic reticulum . 10 Ribosomes suspended in the cytoplasm are the main function to synthesize the following proteins :

Proteins that form part of the cytosol.

Proteins that build the structural elements.

Mobile elements that make up proteins in the cytoplasm.

The ribosome consists of two parts, a larger and a smaller subunit, these leaving the cell nucleus separately. 11 can be induced by experimentation that are held together by loads because the lowered concentration of Mg +2, the subunits tend to separated.

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