



An Overview of Cell Membrane and Cell Membrane Protein

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DESCRIPTION

The Cell Membrane (CM) is also called as the Plasma Membrane (PM), cell surface, or plasma-lemma is a biological membrane that separates and protects the inside of the all cells from the outside environment (the extracellular space). The cell membrane is a lipid bilayer made up of two layers of phospholipids with cholesterol in the body (a lipid component) alternated between them, which maintains appropriate membrane permeability at different temperatures. Membranes also contain membrane proteins, which include essential component proteins that encompass the membrane and act as membrane transporters, as well as peripheral proteins that broadly attach to the cell membrane's external (peripheral) side and act as enzymes to facilitate interaction with the cell's environment.

Glycolipids contained in the outer lipid layer perform a similar function. The Cell Membrane (CM), which is selectively permeable to ions and organic molecules, helps to regulate the movement of substances in and out of cells and organelles. Furthermore, cell membranes are involved in a wide range of cellular processes such as cell absorption, ion conductivity, and cell signaling, as well as providing it as connection surface for several extracellular structures such as the cell membrane and the glycocalyx, as well as the intracellular communication system of protein molecules is known as the cytoskeleton. Cell membranes can be synthetic reassembled in the field of synthetic biology.

The Plasma Membrane (PM) is also known as the cell membrane, protects the cell. It is also providing a stable environment within the cell, and that membrane provides several functions. One function is to transport protein into the cell membrane, while the other is to transport toxic substances out of the cell. Another difference is that the plasma membrane contains proteins that interact with other cells. These proteins can be glycoproteins, which have a sugar and a protein molecule, or lipid proteins, which have a calorie and a protein. And the proteins that attach outside the plasma membrane allow one cell to communicate with another cell.

The cell membrane is acts as supporting structure for the cell and different types of plasma membranes occur in different types of cells, and the plasma membrane contains a large amount of cholesterol as a lipid component in general. This is differentiated from other membranes identified within the cell. Now there are various plants and organisms, such as bacteria and algae, which have different protective mechanisms. Individuals should have a cellular membrane outside of them that is much stronger and more structurally sound than a plasma membrane.

Lipids in the cell membrane

Phospholipids: Phospholipids are essential components of cell membranes. Phospholipids spontaneously form their hydrophilic (attracted to water) head areas to face the aqueous cytosol and extracellular fluid, whereas their hydrophobic or repelled by water tail areas move it away from the cytosol and extracellular fluid. The lipid bilayer is semi-permeable, allowing only certain molecules to move around.

Cholesterol: Cholesterol is another lipid found in the cell membranes. Cholesterol molecules are distributed selectively between membrane phospholipids. By preventing phospholipids from being compact around each other, this helps to prevent cell membranes of becoming strong. Cholesterol is not found in plant cell membranes.

Glycolipids: Glycolipids are carbohydrate sugar channels that are connected to cell membrane surfaces. They help the cell through identifying other cells within the body.

Cell membrane proteins

There are two types of identified proteins in the cell membrane. Peripheral membrane proteins occur outside the membrane and are connected to it through interactions with other proteins. Integral membrane proteins are embedded into the cell membrane, and the majority of people transmit through it. These trans-membrane proteins have impacted on both sides of the membrane. Cell membrane proteins perform a wide range of functions.

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Structural proteins help in the assistance and shape of the cell. Cell membrane proteins allow cells to communicate with their environment by using hormone levels, neurotransmitters, and other biochemical compounds. Transport proteins, such as protein molecules, enable the transport of molecules across cell

membranes. A carbohydrate system is connected to glycoproteins. They are embedded in the cell membrane and assist in cell-to-cell communication as well as molecule transport across it.