

# The plasma membrane essay



The plasma membrane exists in all living things for the simple ground that it serves critical maps without which the cell can non last.

The plasma membrane is composed chiefly of a phospholipid bilayer which is made up of hydrophobic lipid “ tails” that point inwards and hydrophilic phosphate “ heads” that are positioned so that one bed is in contact with the extracellular fluid and the other with the cytosol. The membrane may therefore be thought of as the cell’s “ skin” — enveloping and protecting the cell organs and the karyon. The cell ( and its constituents ) nevertheless. is non cut off from its environment because the plasma membrane is semipermeable. leting specific substances necessary for the normal operation of the cell to go through through.

Besides. embedded in the bilayer are proteins that help the transition of substances that usually would non be able to go through through by simple diffusion. A good illustration would be the sodium-potassium pump ( Krogh. 2003 ) which is responsible for the active conveyance of these ions.

Both K and Na demand to travel up their concentration gradients ( into and out of the cell. severally ) and since both are ions that would be hard to transport through the hydrophobic inside of the bilayer. such conveyance demands to be facilitated by the usage of proteins that will function as channels through which these ions can go through through. This therefore illustrates every bit good the regulative maps of the plasma membrane in that it allows conveyance into and out of the cell in a selective mode ( Postlethwait & A ; Hopson. 2006 ) .

Proteins that lie on the surface of the plasma membrane besides serve a function in easing communicating between the cell and its environment. including other cells. Lymphocytes ( white blood cells ) for illustration. distinguish foreign cells from that of the organic structure by acknowledging antigens. surface-bound proteins that serve as designation for the lymph cell to cognize whether the other cell is an encroacher that needs to be eliminated ( Postlethwait & A ; Hopson. 2006 ) .

Clearly. the plasma membrane serves critical functions in cellular map. non merely in

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protecting the cell but every bit good as in conveyance. ordinance and communicating. and since. as Krogh ( 2003 ) has stated. “ all life is made of cells” . it follows that life merely is non possible without the plasma membrane.

Mentions:

Krogh. D. ( 2003 ) . *Biology: A Guide to the Natural World. 3rd erectile dysfunction. Companion Website.*

Retrieved Dec. 31. 2007. from hypertext transfer protocol: //wps. prenhall. com/esm\_krogh\_biology\_3/

Postlethwait. J. H. . & A ; Hopson. J. L. ( 2006 ) . *Modern Biology.* Texas: Holt. Rinehart and Winston.

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