

Sample literature review on biology

[Environment](#), [Animals](#)



Mitochondria are important organelles found in all nucleated cells contained in both plants and animals. It is because they are the sites in which organic substrates are oxidized to generate adenosine triphosphate (ATP), a substance normally used as a provider of chemical power. This energy produced is used up in most intercellular processes (Pon & Schon, 2011). This discourse will analyze the difference that exists in mitochondrial movement, in plants and animals.

Notable differences between plant mitochondria movements and animal mitochondria movements do occur mainly because of the physical and integral distinctions that are found between the two organisms. To execute transport of this significant number of molecules, the normal plant mitochondrion has a variety of mitochondrial bearing proteins inside. Usually, these are transmembrane substances with a shared ordinary form and they transport relatively small charged molecules, like metabolites. In *Arabidopsis*, there exist close to 60 members, most of which are not necessarily characterized, giving an idea to the complicated nature of the mitochondrial movement processes (Kempken, 2010). It is worth mentioning that the mitochondria transport more than metabolites, and, as such, also other forms of mobilizers are engaged. The external membrane is semi-permeable to all non-polymeric complexes. The semi-permeability is an outcome of the presence of porous elements, which seem to be exposed in most in vitro tests. Animals' cells have notable pore-forming substances in the mitochondrial exterior membrane, called porins, which seem to regulate the transport across the membrane. In plants, non-photosynthetic energy transduction occurs in eukaryotic cells which, execute aerobic metabolic

processes. Energy transduction covers up all those processes through which the chemical bearing energy of biological substrates is converted into an easily transported form, adenosine-5'-triphosphate (ATP). The rapid rearrangements of F-actin meshwork interconnecting end cellular membranes turn out to be especially important for perception-signaling purposes of plant cells, especially in association with guard cell movements, mechanical and gravity-sensing, plant host-pathogen interactions, and wound-healing (Alberts B, Johnson A. & Lewis J, et al., 2002).

The mitochondrion has its integral genome and protein breaking down abilities. Most of the protein synthesized by the mitochondria are encoded by the genes in the nucleus of the cell and must be imported to into the mitochondrion. Proteins remaining in the mitochondrion are characterized by a special signal sequence that is recognized by the mitochondrial stimulation, which is a chaperone as it targets the proteins to a receptor embedded in the outer membrane of the mitochondrion (Drouart, 2012).

Work cited

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