

The cell essay example

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Plant Cell Wall and Bacterial Cell Wall

The structure of a plant cell wall has both primary and secondary cell walls composed of cellulose, lignin, hemicelluloses and pectin. On the other hand, the bacterial cell wall structure is composed of peptidoglycan. There are also some differences and similarities in their roles. The bacterial cell wall helps in maintaining the shape of the cell, provides protection, and also acts as an anchor for flagella. The plant cell wall also helps in maintaining the shape of the cell just like the bacterial cell wall. In addition, it provides support, stores carbohydrates, regulates material flow in and out of the cell, regulates growth, provides protection of the cell and enhances intercellular communication (Ivyrose, 2012).

Chloroplast

A chloroplast is a cell organelle found in eukaryotic cells whose function is to provide a site for photosynthesis. The chloroplasts are organelles and they are only found in eukaryotic algae and plant cells. The chloroplast is enclosed by double-layered membranes that are separated by a space. These membranes are phospholipids membranes. The membranes have infoldings that increase the surface area for reactions. Photosynthesis is important in the cell for it provides energy for the cells' growth (Ivyrose, 2012).

The function of chloroplast cell structure is to absorb sunlight and use it to produce energy in the process known as photosynthesis. The chloroplast contains chlorophyll which gives the green color of leaves and they are responsible for photosynthesis. The energy produced is stored NADPH or ATP

(Prokaryotic and Eukaryotic Cells, 2004).

It is indicated that there are about 40-200 chloroplast in each photosynthetic cell. There is also a gelatinous matrix called the stroma in the inner membrane of chloroplast which contains ribosomes and DNA. It is also a site for biochemical synthesis. The membrane has membranous sacs known as thylakoids that are in an arrangement called grana where photosynthesis takes place (Prokaryotic and Eukaryotic Cells, 2004).

References:

Ivyrose. (2012). Chloroplast Structure. Retrieved on 2 February 2013 from <http://www.ivy-rose.co.uk/Biology/Organelles/Chloroplast.php>

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