Structure and function of the cell

Name

Institution

**Structure and function of the cell**

**Cell**: it is the basic structural and functional unit of life. Cell is a living and distinctive entity that is capable of replication and combining to form a new organism; a new life. Biologists agree upon various size and shapes of the cell that are highly function specific in nature however a generalized living cell; found in all the humans seems like this:



**Image**: *labeled diagram of the human cell structure*

Following parts of the cell, with their primitive functions are defined below:

**Cell membrane:** it is the outer layer of the cell that separates inner matrix of the cell from outside medium or extracellular fluid. It is semi- permeable in nature and acts as a barrier for passing and rejecting desired molecules.

**Nucleus:** Nucleus is termed as the brain of cell, as it controls all the functions happening in the cell. It contains Nucleolus that consists of DNA strands which is the basic heredity material carrying genetic information from ancestors; responsible for producing structural and functional genetic tendencies in the individuals.

**Cytoplasm** it is a fluid- like material containing 90% of water and acts as a medium for all the cell components i.e., nucleus and other cell organelles. All types of chemical reactions take place within the cytoplasm.

**Organelles:** organelles are in fact *little organs* present in the cytoplasm and perform various primitive functions. These organelles include endoplasmic reticulum, golgi apparatus, mitochondria, ribosomes and lysosomes. These organelles take active part in the metabolism of food, cellular oxidation, cell division, generation of energy and formation of proteins and enzymes.

**References**

Cells, tissues and membranes (2018). SEER Training Module. Retrieved from <https://training.seer.cancer.gov/anatomy/cells_tissues_membranes/>