## COMMENTARY

## A Short Note On Cell Physiology And Its Structures

Doha M Beltagy\*

Department of Biochemistry, Damanhour University, Egypt



ARTICLE HISTORY Received November 03, 2021 Accepted November 12, 2021 Published November 28, 2021

## Commentary

All living organisms are made up of cells, which are microscopic fundamental units. Every living thing has cells the main categories (Kingdoms) of living things are bacteria, protozoans, fungus, plants, and animals. Some organisms are made up entirely of single cells (e.g. bacteria and protozoans). Animals, including humans, are multicellular, though. An adult human body contains over 100 trillion cells! Each cell requires basic needs in order to survive. The organ systems of the body are mostly designed to meet the basic demands of the body's billions of cells (such as oxygen, food, and waste removal).

Cell biology is An Introduction Around 200 different types of specialised cells perform a wide range of actions that assist each system contribute to overall body homeostasis. At the same time, all cells share key structures and functions that allow them to maintain their high levels of activity. We divide the cell into three segments for simplicity of study: 1. membrane of the plasma cytoplasm 2 3. Atomic nucleus The cell is the most basic functioning unit in humans, as it is a self-contained, fully functional living creature. Humans are multicellular beings with a variety of cell types that collaborate to maintain life. Water, macronutrients (carbohydrates, proteins, fats), micronutrients (vitamins, minerals), and electrolytes are all non-cellular components in the body. Tissue is made up of a group of cells that work together to complete the same task. Organs are made up of masses of tissue that work together to accomplish certain functions in the body. Despite this hierarchical organisation, everything revolves around the cell, a sophisticated entity that allows life to exist. Structure and Functions of Human Cells: Human Cell Components Organelles are structural components of the cell that allow it to function and preserve life.

The organelles are suspended in the cytoplasm, a gelatinous matrix contained within the cell membrane. The red blood cells are one of the few cells in the human body that lack practically all organelles. The following are the major organelles: Membrane of the Nucleus Cell Endoplasmic reticulum (ER) is a type of endoplasmic reticul The Golgi apparatus is a type of digestive system. Lysosomes Peroxisomes Mitochondria Microfilaments and microtubules are two types of microtubules.

The nucleus is the cell's chief controller. It contains genes, which are DNA collections that control every element of human anatomy and physiology. The blueprint for each type of cell is included in the DNA that is organised into chromosomes and permits the cell to replicate. The nucleolus is a region located within the nucleus. It is just an accumulation of RNA and proteins within the nucleus that is not surrounded by a membrane. The nucleolus is where ribosomal RNA is transcribed and assembled from DNA. Membrane of the cell: The cytoplasm, components within the cell, and the organelle are all contained within the cell membrane. It's a protein-and-lipidbased membrane with two layers.

Endoplasmic Reticulum (ER) the endoplasmic reticulum (ER) is a membrane structure that contains tubules and vesicles in a network. Its design allows substances to pass through it while remaining isolated from the remainder of the cell until the production operations inside are completed. Endoplasmic reticulum is divided into two types: rough (granular) and smooth (a granular). Between the plasma membrane and the nucleus is the cytoplasm, which contains all of the cellular contents.

The fluid portion of cytoplasm is referred to as cytosol.

Contains the following (water, dissolved solutes, and suspended particles).

Contact Doha M Beltagy 🔤 Beltagy@gmail.com 🖪 Department of Biochemistry, Damanhour University, Egypt

<sup>© 2021</sup> The Authors. This is an open access article under the terms of the Creative Commons Attribution NonCommercial ShareAlike 4.0 (https://creative-commons.org/licenses/by-nc-sa/4.0/).

Several different types of organelles surround the cytoplasm (little organs). Each sort of organelle has its own distinct shape and function.

Following are a few example (Ribosomes, endoplasmic reticulum, Golgi complex, lysosomes, peroxisomes, and mitochondria)

Apparatus of the Golgi the Golgi apparatus is a layered collection of flat vesicles. It is linked to the endoplasmic reticulum in that chemicals synthesised there are transported as vesicles and merge with the Golgi apparatus. The products of the ER are thus stored in the Golgi apparatus and transformed into numerous compounds required for the cell's many tasks.

Lysosomes are vesicles that form when the Golgi apparatus breaks down. Depending on the type of cell, it varies in size and function. Lysosomes contain enzymes that assist the cell digest nutrients and break down any cellular trash or invading microbes such as bacteria.