

Author(s) retain the copyright of this article.

Perspective

A short note on cell biology

Jianan Zhang*

Department of Pharmacy, Beijing Forestry University, Beijing 100083, China

Accepted 21 September, 2021

DESCRIPTION

Cell biology is the study of the structure, function, and behaviour of cells. Cell biology includes both prokaryotic and eukaryotic cells and can be broken down into a variety of sub-topics, such as cell metabolism, cell communication, cell cycle, biochemistry, and cell composition.

Testing of cells is performed using a variety of techniques, including cell culture, different types of microscopy, and cell fractionation. These have become possible and are now being used to discover and study how cells function, ultimately providing insights into understanding larger organisms. Knowledge of the components of cells and how they function is the basis of all biological sciences and is also essential for research in biomedical fields such as cancer and other diseases. Cell biology research is associated with other disciplines such as genetics, molecular genetics, biochemistry, molecular biology, medical microbiology, immunology, and cell chemistry.

Cells were first seen in Europe in the 17th century with the invention of the composite microscope. In 1665, Robert Hooke called the components of all living things cells after looking at parts of the cork and observing cell-like structures. However, the cells were dead and there was no indication of the actual total composition of the cells. A few years later, in 1674, Anton Van Leeuwenhoek was the first person to analyse living cells in algae research. All of these preceded the cell theory that all living things are made up of cells, which are the functional and structural units of living things. It came to the conclusion in 1838 that plant scientist Matthias Schleiden and animal scientist Theodor Schwann examined living cells in plant and

animal tissues. 19 years later, Rudolf Willeopard continued to contribute to the cell theory, adding that all cells were derived from existing cell division. Although widely accepted, there are many studies that question the validity of the cell theory. For example, viruses lack the general properties of living cells, such as membranes, organelles, and the ability to replicate themselves.

This cell was first discovered and named by Robert Hooke in 1665. He noticed that they looked strange like a cell or a small room used by a monk. But what Hooke actually saw was a dead cell wall of plant cells that appeared under a microscope. A description of the hooks for these cells was published in *Micrographia*. Scientists have struggled to determine if the viruses are alive and if they agree with the cell theory.

Modern cell biology study examines several methods for cultivating and manipulating cells outside of a living organism in order to advance human anatomy and physiology research and to develop drugs. The methods for studying cells have progressed. Scientists now have a greater grasp of the structure and function of cells because to advances in microscopy, methods, and technology. The following is a list of some of the most common cell biology procedures.

Culture of cells rapidly growing cells on media enable for a large number of a specific cell type to be studied in a short length of time. Cell culture is one of the most important techniques in cellular and molecular biology, as it provides good model systems for investigating cell physiology and biochemistry (e.g., metabolic research, ageing), pharmacological and toxic chemical effects on cells, as well as mutagenesis and carcinogenesis.

*Corresponding author. Zhang Jianan, E-mail: jiananzhang@gmail.com