

Group Rayan
Dephy Xoolah
Dafaditya
Dit. n.

Cell-Theory

B. Sc. (H) Zoology
Page No. _____
Date 13/11/20

- The real study of cell virtually began with the discovery of a microscope by van. Leeuwenhoek (1632)
- An English Biologist- Robert Hooke (1665) was the first to introduce the term cell by observing these in a section of cork.
 - In the next hundred years or so many other scientists made observation on the cell & some of its components.
 - Among these were Lamarck (1809) & Schleiden (1824) & Turpin (1826), Brown (1831) noticed that the nucleus was a regular constituent in all plant cells.
 - In (1838) Schleiden, a German Botanist studied the plant cell & emphasized that "cells are organisms & entire animals and plants are aggregations of these organisms arranged according to definite laws.
 - In (1839) Schwann, a German zoologist stated that all organisms are composed of essentially like parts namely of cells.
 - The cell theory was propounded by two German Biologists - M.J. Schleiden & T. Schwann.
 - The cell theory states that - The cell is the unit of structure & function in all living organisms & that cells arise from the division of pre-existing cells.
 - Thus all organisms are made up of structural units, the cells, or building blocks, of the body.
 - As to Rudolf Virchow (1858) - "The cells are organisms and all living beings are composed of assemblage of cells, which arise from pre-existing cells, that is the animal arises only from an animal & the plant only from a plant."

Age to Cell Theory & Organismal Theory, the cell may be considered as a smallest mass of protoplasm having permeable P.M. and nucleus which is capable of energy transformation, Biosynthesis, & self reproduction.

- But certain primitive units of such as viruses do not fulfil the fundamental requirements of the cell as suggested by the cell theory, therefore in the present state of knowledge the cell has been defined as the smallest, but complete expression of the fundamental organization & functions of all living organisms, delimited by a permeable P.M. and capable of reproducing in a medium free of other living system unlike the viruses.

However, there is an exception to cell theory the viruses are peculiar, simple & very minute organisms which have no cellular form. These are considered as "living chemicals".

==