

CELL THEORY

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❖ Matthias Schleiden found that all plants have similar types of cells having cell walls.

❖ Theodore Schwann found that animal cells do not have cell wall and have similar organization like plant cells.

❖ Schwann proposed cell hypothesis which states “Both animals and plants are formed of cells”.

Postulates of cell theory

- ❖ All organisms are made up of cells.
- ❖ The cells contain hereditary materials and are responsible for the transfer of characters.
- ❖ New cells are formed from abiotic materials
- ❖ Cells are responsible for all the metabolic activities inside the cells.
- ❖ Cell is a small mass of protoplasm usually containing a nucleus along with some other organelles.

Limitations of cell theory

- ❖ Cell theory fails to explain the process of formation of new cells.
- ❖ Cell theory suggest that new cells were formed inside old ones from the nucleus which was referred to as cytoblast.

Exceptions to cell theory

- ❖ Virus lack protoplasm like that of cells and are made up of nucleic acids and proteins.
- ❖ Bacteria and blue-green algae lack nucleus.
- ❖ Coenocytic hyphae of fungus are multinucleated and aseptate. Such conditions are not explained in the cell theory.



**THANK
YOU**

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