

Student Essay on Cell Theory

Cell Theory

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Essay

Technology including the development of the microscope has had a great impact on the development of cell theory. The cell theory states that cells are the smallest unit of life, all living things are made of one or more cells and that cells come from pre-existing cells. Technological advancements such as the manufacturing of lenses and magnifying devices have had a large impact on the cell theory. In 1665, cells were observed for the first time by Robert Hooke. Robert Brown due to the microscope was able to identify the nucleus as a large body inside cells. The development of the light and electron microscope has had a large impact on the cell theory. It has improved the magnification and resolution when viewing a cell. The light microscope has enabled scientists to quickly view living cells, where as the electron has a high magnification and has allowed small objects such as molecules to be viewed. This has allowed scientists to accurately view cells. Improved sectioning and staining of slides has impacted upon the cell theory. Improved staining and sectioning has enabled more accurate and clear examinations of cells to occur. In the 1800s with better microscope lenses and the improved techniques of staining (with dyes), sectioning (now with wax) and use of fixatives, which could now preserve cellular structure, cells could be seen even more clearly. These clearer images showed cells formed from other cells and that living matter was made of cells. These discoveries developed the cell theory so that it stated that cells came from pre-existing cells and that all living matter was composed of cells. In 1933 with the development of the electron microscope, cells could be seen at a greater magnification. This revealed that there were both procaryotic and eucaryotic cells. Although technology has had a great impact on the development of the cell theory its negatives are that it has raised exceptions such as viruses. It has also taken over two hundred years after the creation of the microscope for scientists to come up with the cell theory.