

History of the cell

- ➡ In 1858 the German pathologist **Rudolf Virchow** concluded that cells can arise only from pre-existing cells.
- ➡ In 1876 the German zoologist **Oscar Hertwig** concluded that fertilisation occurs when gametes (egg and sperm) are formed by reductional division.

Finally, thanks to all these discoveries and the outstanding contribution of the scientists **Theodore Schwann, Matías Schleiden y Rudolf Virchow** an updated versión of the celular theory was arrived at.

Cell theory:

1.- All living organisms are made up of one or more cells.

2.- A cell is the structural, functional and fundamental unit of all living things.

3.- All cells come from other pre-existing cells.

4.- Cells store all the hereditary information of the organisms to which they belong and are passed on from one generation to the next.

Preview from [Notesale.co.uk](https://www.notesale.co.uk)
Page 6 of 18

Main Differences between Eukaryotic and Prokaryotic cells

Prokaryotic Cell	Eukaryotic cell
<i>Dispersed DNA without nuclear membrane</i>	<i>DNA stored inside the nucleus with nuclear membrane</i>
<i>Absence nucleolus</i>	<i>Presence nucleolus</i>
<i>Absence organelles of membrane</i>	<i>Presence organelles of membrane</i>
<i>Absence chloroplast</i>	<i>Presence chloroplast in plant cell</i>
<i>Presence cell wall</i>	<i>Presence cell wall only in plant cell</i>
<i>Ribosomes 70S</i>	<i>Ribosomes 80S</i>
<i>Absence of mitochondria</i>	<i>Presence of mitochondria</i>
<i>Absence of active transport of the endocytosis and exocytosis types</i>	<i>Presence of active transport of the endocytosis and exocytosis types</i>
<i>Type of cell reproduction: Amitosis</i>	<i>Type of cell reproduction: Mitosis and meiosis</i>