Cell Biology | Cell Cycle: Interphase & Mitosis

The Importance of the Cell Cycle

In this article, we will discuss the cell cycle, which is the process of cell replication. The cell cycle is important because it allows cells to replicate and control cell growth. The various stages of interphase and mitosis, which are the phases and steps that a cell goes through to replicate itself.

What is a Cell?

A cell is the basic unit of all living things. A eukaryotic cell, such as a human cell, has three main components: a cell membrane, a nucleus, and cytoplasm. The cell membrane is a phospholipids bi-layer that surrounds the entire structure. The nucleus houses genetic material in the form of chromatin, which is DNA wrapped around different types of histone proteins. Cytoplasm is the fluid that surrounds the nucleus.

The G1 Phase

The first phase of the cell cycle is called the G1 phase or gap one phase. During this phase, the cell prepares to replicate itself. The cell increases the number of organelles, such as ribosomes and mitochondria. It synthesizes proteins and enzymes that aid in DNA replication, and it prepares to duplicate its genetic material.