

Vidya Bhawan Balika Vidyapeeth Lakhisarai

Arun Kumar Gupta

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### **Components of a Eukaryotic Cell**

An eukaryotic cell is composed of various cell components as cell membrane, cell wall (only in plants), mitochondria, chloroplast, Golgi bodies, ribosomes, centrioles (only in animals), etc. All these are described here under in detail.

#### **Cell Membrane**

Every living cell is covered by a thin, elastic, transparent, semi-permeable and regenerative membrane called cell membrane also called plasma membrane or plasmalemma. The plasma membrane separates the internal environment of the cell from external environment. As this membrane helps in regulating the entrance and exit of molecules into and out of the cell. In 1950s with the advancement of electron microscope the detailed structure of the membrane was studied. Most of the initial studies on cell membrane structure, i.e., especially on the human Red Blood cells (RBCs), which enabled the scientists to deduce the possible structure of plasma membrane.

Human RBCs are considered to be the best material for the : study of biochemical composition of the cell membrane because they lack nucleus as well as cytoplasmic organelles.

#### **Structure**

Studies on human RBCs concluded that the cell membrane is composed of lipid which forms a bilayer with protein molecules embedded in it at places. Later it was revealed that cell membranes also possess protein and carbohydrates.