

PREFACE

Both living and non-living things are composed of molecules made from chemical elements such as Carbon, Hydrogen, Oxygen, and Nitrogen. The organization of these molecules into cells is one feature that distinguishes living things from all other matter. Cells are the basic building blocks of all living things. The human body is composed of trillions of cells. They provide structure for the body, take in nutrients from food, convert those nutrients into energy, and carry out specialized functions. Cells also contain the body's hereditary material and can make copies of themselves. Cells have many parts, each with a different function. Some of these parts, called organelles, are specialized structures that perform certain tasks within the cell. Cell theory refers to the idea as cells are the basic unit of structure in every living thing. Development of this theory during the mid-17th century was made possible by advances in microscopy. This theory is one of the foundations of biology.

"Theory, Practice and Techniques in Cell Biology" focuses on the underlying principles that illustrate both how cells function as well as how we study them. The theory says that new cells are formed from other existing cells, and that the cell is a fundamental unit of structure, function and organization in all living organisms. The text begins with an overview of cell and its functions and closes with a chapter on cell cycle and cell division. The book delivers comprehensive, clearly written, and richly illustrated content in a user-friendly format intended for graduate and undergraduate students of Life Sciences.