

PREFACE TO THE SECOND EDITION

I have great pleasure in presenting the multicoloured second edition of the book "Biochemistry", for the needs of the students in the medical and other health sciences.

The first edition of this book "Biochemistry" has been extremely popular among the students, which has been recommended by various universities as a reference book for students. This overwhelming response has encouraged me to bring out this revised second edition. The simple, concise, point-to-point stepwise format that has made the first edition so popular, has been maintained in this revised edition. The suggestions and criticisms of teachers and students have been used as a basis of revision.

The second edition has tremendous improvement over the first one. Every effort has been made to keep the book lucid yet modern; clinical applications of biochemistry have been especially emphasized.

The salient features of the revised edition are as follows:

- Content of the book is divided into eight sections. Each section is further divided into chapters; spreading over 37 chapters.
- Seven new chapters have been included on:
 1. Neurotransmitters.
 2. Coronary heart diseases, cardiac markers and lipid profile.
 3. Acquired immunodeficiency syndrome.
 4. Biomedical waste.
 5. Connective tissue.
 6. Muscle and
 7. Chromatography, electrophoresis, photometry and radioimmunoassay.
- A number of new **illustrations, figures and tables** have been included to facilitate understanding of the text. Few of the old figures have been redrawn.
- Major revisions have been made in chapters include:
 1. The chapter on "**The cell**" which deals with the biochemistry of subcellular organelles, the topic cell membrane have been extensively reorganized to account for understanding of the roles of these organelles. It is here that the subject matter, cytoskeleton is introduced.
 2. The chapter on protein chemistry has been replaced by two chapters. A separate new chapter included on plasma proteins and immunoglobulins to do justice with this rapidly evolving subject.
 3. The topic **enzyme inhibitors** in the chapter number 6 has been completely rewritten.
 4. Chapters 9 and 20, chemistry of nucleic acid and mechanism of hormone action have been thoroughly revised and updated with insertion of latest information and deletion of redundant portions.
 5. The growing importance of molecular biology impelled me to expand the previous chapter on DNA replication, transcription, translation, mutation and regulation of gene expression, into two chapters. The expansion allowed me to introduce important topics not covered sufficiently in the previous edition such as DNA repair system, telomeres, DNA recombinations, post-transcriptional RNA processing, protein targeting and degradation and regulation of eukaryotic gene expression.
- Lastly, the second edition is printed in multicolour to enhance readability as well as to give it a new look so as to highlight important features and thereby quick assimilation of knowledge. The reorganization and revision of the text will facilitate the study and understanding of the subject. I hope my efforts will be well appreciated by the teachers and students community at large. I will be highly obliged if you can send me your comments, criticisms and suggestions at my e-mail address as: pankajanaik@hotmail.com

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