

1. Record Nr.	UNINA9910896531003321
Titolo	Clinical Applications of Biomolecules in Disease Diagnosis : A Comprehensive Guide to Biochemistry and Metabolism // edited by Ram Lakhani Singh, Pankaj Singh, Neelam Pathak
Pubbl/distr/stampa	Singapore : , : Springer Nature Singapore : , : Imprint : Springer, , 2024
ISBN	981-9747-23-6
Edizione	[1st ed. 2024.]
Descrizione fisica	1 online resource (457 pages)
Disciplina	574.19283
Soggetti	Clinical biochemistry Cytology Diseases Biochemistry Metabolism Medical Biochemistry Mechanisms of Disease Metabolic Pathways
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Chapter 1_Introduction to Clinical Applications of Biomolecules in Disease Diagnosis -- Chapter 2_Carbohydrate Metabolism in Health and Diseases -- Chapter 3_Protein Metabolism and Its Profiling for the Diagnosis of Metabolic Disorders -- Chapter 4_Disorders of Lipid Metabolism -- Chapter 5_Nucleic Acid Metabolism and Disorders -- Chapter 6_Vitamins and its Impact on Human Health -- Chapter 7_Electrolytes and Acid-Base Disorders -- Chapter 8_Metabolism of Macro Elements (Calcium, Magnesium, Sodium, Potassium, Chloride and Phosphorus) and Associated disorders -- Chapter 9_Metabolism of Essential Trace Elements and its Disorders -- Chapter 10_Enzymes and their Clinical Applications -- Chapter 11_Hormonal Manifestations of Endocrine Diseases -- Chapter 12_Biomolecules of Blood in Health and Their Role in Health and Diseases -- Chapter 13_Free Radicals and their relation to Diseases and Protection against them -- Chapter 14_Clinical Biochemistry of Cancer -- Chapter 15_Outbreak of Deadly Coronavirus

Sommario/riassunto

This textbook introduces the clinical applications of biomolecules in disease diagnosis, covering a range of topics in biochemistry. The book discusses carbohydrate and protein metabolism abnormalities, lipid digestion and absorption defects, disorders of purine and pyrimidine metabolism, and the chemistry and biological roles of water- and fat-soluble vitamins. It also covers the roles of different macroelements and essential trace elements in physiological processes and the prevention of chronic diseases. The final chapter focuses on recent developments in our understanding of the role of enzymes in disease development and diagnosis. The book chapter also explores the causes and effects of free radicals in the body, including oxidative stress and diseases such as cardiovascular and neurodegenerative diseases. Finally, the chapter discusses cancer development, causes, diagnosis methods, biomarkers, and current treatments such as targeted drug therapy, chemotherapy, and radiation therapy. This book is a useful resource for undergraduate and postgraduate students, researchers and practitioners in biochemistry, medicine, and health sciences.

---