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Nota di contenuto	1.An Introduction to Beta Glucan and Beta Glucanases -- 2.Industrial Applications of Beta Glucanases -- 3.Microbial Sources of Beta Glucanase Enzymes -- 4.Role of Beta Glucanases in Animal Nutrition -- 5.Betaglucanse in Breweries -- 6. Exploitation of Actinobacteria for Beta Glucanolytic enzymes –Screening and Characterisation -- 7.Structural Characterisation of Beta Glucanase Genes from Actinobacteria -- 8. Application of Codon Optimization in Actinobacterial Beta Glucanases -- 9.Actinobacterial Beta Glucanases: Recombinant Expression of in E. coli -- 10.Purification and Properties of Recombinant Beta Glucanases Enzymes -- 11.Fungal Beta Glucanases -- 12.Industrial Production and Characterisation of Beta Glucanases -- 13.Protein Engineering of Beta Glucanase Enzymes -- 14.Biotechnological Avenues in Hybrid Beta Glucanase Enzyme Production.
Sommario/riassunto	This book offers an overview of the current knowledge on beta glucanase enzymes derived from actinobacterial source, their structure, functions and industrial applications. It summarizes the exploitation of actinomycetes, assay methods for beta glucanase screening, structural

characterisation, genetic engineering, protein engineering, strategies for purification, characterisation and finally how to synthesize a hybrid enzyme of beta glucanases.Enzyme beta glucanases have considerable interest in industrial biotechnology owing to its distinct effect on the hydrolysis of insoluble beta glucan molecules and applications in particular industrial sectors such as food, feed and beverages industries. The beta glucanases are characterized extensively in microorganisms viz. bacteria, fungi and also in plants. A wide varieties of actinobacterial - glucanases have exclusively active on -glucan substrates and cleave the mixed linkage -glucan chains at different points. This is significant for picking precise substrates for the assay of each type of enzymes within this enzyme groups. The well recognized specificity and mechanism of action within the enormous substrates allow to understand that most of them are varied from cellulases, excluding -1,4-glucanases. The progress in genetic and protein engineering in actinobacterial beta glucanases improves the stability, activity and thermodynamic properties in relation with industrial relevance. This book will be useful for researchers and students engaged in industrial biotechnology, enzyme production, molecular biology, protein engineering and many more.