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Nota di contenuto	Section 1: Microbial Biotechnology -- 1.Immobilization of Aspergillus oryzae -galactosidase on silica nanoparticles: characterization and application -- 2. Biosynthesis of Protease by Aspergillus Terreus NCFT 4269.10 using Chickling Vetch Peels -- 3. Production of polyhydroxybutyrate (biopolymer) by Bacillus species isolated from municipal waste -- 4. Bacterial Polyhydroxyalkanoates - Recent trends in production and applications -- 5. An overview of surfactant aided bioprocessing: applications and future perspectives -- Section 2: Microbes in health -- 6. Autophagy and microbial pathogenesis: An interactive overview -- 7. Potentiality of Cymbopogon flexuosus oil as natural antifungal against azole-resistant strains of Candida -- 8. Prevalence of Multidrug Resistant Bacteria in River Cauvery and Computational Virtual Screening for Natural Inhibitors against MDR Genes -- 9. Probiotics for human health: Current Progress and Applications -- Section 3: Microbial Interactions.-10.Functional characterization of phosphate solubilizing bacteria from coastal rice

soils of Odisha -- 11. Tolerance of filamentous fungi and bacteria in soil contaminated with trace metals -- 12. Transformation, purification and quantification of soy isoflavone from *Lactobacillus* sp., and *Bifidobacterium* sp. -- 13. Processing of pearl millet to prepare ready to eat (rte) extruded healthy snacks -- 14. Studies on screening, isolation and optimization of fungal chondroitinase -- 15. *Citricoccus zhacaiensis* - A novel osmotolerant plant growth promoting actinobacterium -- Section 4: Computational approaches in microbiology -- 16. In-silico design and antibody response to peptide sequences from protective antigen and lethal factor toxins of *Bacillus anthracis* -- 17. Microbial enzyme engineering: applications and perspectives.

Sommario/riassunto

This book is a one-stop reference resource, presenting recent research in various emerging areas of microbiology, including microbial biotechnology, microbes in health, microbial interactions, agricultural microbiology and computational approaches. Recent discoveries in microbiology have created a great deal of interest among researchers around the globe, and as such the book discusses a number of important research topics, such as microbial enzymes and nanoparticles, bacterial polyhydroxyalkanoates, biosurfactant aided bioprocessing, autophagy and microbial pathogenesis, multidrug resistant bacteria, probiotics, rhizosphere, metal tolerant bacteria, plant- beneficial environmental bacteria and therapeutic applications of fungal chondroitinase. It serves as a valuable resource for masters, doctoral and postdoctoral researchers in life sciences, as well as scientists involved in various interdisciplinary research areas. It also provides useful material for higher-level graduate courses in microbiology and biotechnology.
