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Nota di contenuto	Contents -- Current Books of Interest -- Contributors -- Preface -- Part I: General Introduction -- 1: Probiotics and Prebiotics: Current Status and Future Trends -- Definition of pro-, pre-, syn-, post- and other -biotics -- Synbiotics -- Recent applications of pro- and prebiotics, alone or in combination -- Pitfalls -- Future trends -- 2: Functional Aspects of Prebiotics and the Impact on Human Health -- Introduction -- The colonic microbiota and its functions -- The prebiotic concept -- Prebiotic modulation of the microbiota composition -- Prebiotic mechanisms -- Health implications associated to prebiotics -- Future needs to substantiate prebiotic functionality -- Conclusion -- Part II: Probiotics -- 3: Lactobacilli as Probiotics: Discovering New Functional Aspects and Target Sites -- Introduction -- The genus Lactobacillus -- Probiotic effector molecules -- Effects of genetic, processing, or product formulation changes on efficacy and safety of probiotics -- Novel applications -- Deleterious effects -- Future perspectives -- 4: Bifidobacteria - Regulators of Intestinal Homeostasis -- Introduction -- Genomics of Bifidobacterium -- Ecology of bifidobacteria -- Health benefits of bifidobacteria -- Interactions between bifidobacteria and the host -- Industrial-scale production of bifidobacteria -- Conclusions and future perspectives -- 5: Propionibacteria also have Probiotic Potential -- Introduction: description of propionibacteria -- Propionibacterium as human and animal probiotics -- Other relevant properties with impact

on health: potential of propionibacteria as nutraceutical factories -- Industrial application of propionibacteria: dairy starters and biopreservatives -- Future trends and concluding remarks -- 6: Non-LAB Probiotics: Spore Formers -- Spore formers -- Spore formation -- Spore structure -- Aerobic spore formers are intestinal bacteria -- Aerobic spore formers interact with intestinal cells -- Probiotic spore formers -- Probiotics for human use: examples and reported effects -- Probiotics for animal use: examples and reported effects -- Future trends -- 7: Mechanisms of Action of Probiotic Yeasts -- Beneficial effects of probiotic yeasts as demonstrated by biological and clinical trials -- Mechanisms of action responsible for beneficial effects of probiotic yeasts -- Conclusion -- Future perspectives -- 8: Yeasts as Probiotics - Established in Animals, but what about Man? -- What are probiotic microorganisms? -- Animal applications: from feed to probiotic -- Rodents as model monogastrics for the study of probiotic mechanisms -- Fractionated probiotic yeast products and animal health -- Yeast probiotics in man -- 9: Escherichia coli - More than a Pathogen? -- Pathogenic E. coli - one pathogen for a broad variety of pathotypes and diseases.

Sommario/riassunto

Composed of nearly a thousand different types of microorganisms - some beneficial, others not - the human gut microbiota plays an important role in health and disease. This is due to the presence of probiotic or beneficial microbes, or due to the feeding of prebiotics that stimulate the endogenous beneficial microbes (these promote health by stimulating the immune system, improving the digestion and absorption of nutrients, and inhibiting the growth of pathogens). The notable health benefits of probiotic organisms have prompted much commercial interest, which in turn has led to a plethora of r