1. Record Nr. UNINA9910380754103321

Autore Shenderov Boris A

Titolo METABIOTICS: PRESENT STATE, CHALLENGES AND PERSPECTIVES / / by

Boris A. Shenderov, Alexander V. Sinitsa, Mikhail M. Zakharchenko,

Christine Lang

Pubbl/distr/stampa Cham:,: Springer International Publishing:,: Imprint: Springer,,

2020

ISBN 3-030-34167-4

Edizione [1st ed. 2020.]

Descrizione fisica 1 online resource (X, 123 p. 8 illus., 2 illus. in color.)

Disciplina 612.32

Soggetti Metabolism

Biomedical engineering Medical microbiology

Microbiology

Food—Biotechnology

Metabolomics

Biomedical Engineering/Biotechnology

Medical Microbiology Food Microbiology Food Science

Lingua di pubblicazione Inglese

Formato Materiale a stampa

Livello bibliografico Monografia

Nota di bibliografia Includes bibliographical references and index.

Nota di contenuto Ch 1: Introduction -- Ch 2: The composition and functions of the

human gut symbiotic microbiota -- Ch 3: Contemporary views on biotechnological potential of symbiotic microorganisms -- Ch 4: The digestive function of human gut microbiota -- Ch 5: Metabolic relationship between the host and its gut microbiota -- Ch 6: Factors and agents that modify the composition and functions of symbiotic microbiota, diagnostic methods for microecological imbalance and its consequences -- Ch 7: Contemporary microecological strategies of gut microbiota modulating for human health preservation, restoration and

improvement -- Ch 8: Molecular language of symbiotic gut microorganisms -- Ch 9: Drawbacks and negative consequences of

traditional probiotics based on live microorganisms -- Ch 10:

Metabiotics, New stage of the probiotic concept development -- Ch 11: Methods and techniques used for obtaining and identifying of microbial low molecular weight cellular compounds, metabolites and signaling molecules -- Ch 12: Classification of metabiotics and their brief description -- Ch 13: Some of the best-known metabiotics on the market of microecological market -- Ch 14: Cellular metabiotics and Metabolite metabiotics -- Ch 15: Prospects in the field of intended-use metabiotics creation -- Ch 16: Some new targets and approaches to the construction of intended-use metabiotics -- Ch 17: Conclusion.

Sommario/riassunto

Aimed at students, researchers, nutritionists, and developers in food technology, this research text addresses the nascent field of metabiotics. Metabiotics are products based on components of cells, metabolites, and signaling molecules released by probiotic strains, engineered to optimize host-specific physiological functions in a way that traditional probiotics cannot. This book examines the history, processes, design, classifications, and functions of metabiotics. It includes an overview of the composition and function of the gut microbiota, and discusses development of target-specific metabiotics. Further coverage includes comparisons to traditional probiotics, as well as probiotic safety and side-effects. Metabiotics: Present State, Challenges and Perspectives provides a complete history and understanding of this new field, the next phase of the probiotic industry.