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Nota di contenuto	1. Rhizosphere Microbiome Metagenomics: Elucidating the Abditive Microflora -- 2. Rhizosphere microbiome and its role in plant growth promotion -- 3. Microbial community dynamics during soil ecosystem development -- 4. Bacterial Diversity in Cold Environments of Indian Himalayas -- 5. The Microbiome of the Himalayan Ecosystem -- 6. Microbes and mountains: The mid-domain effect on Mt. Fuji, Japan OR Humpback trends in microbial diversity on Mt. Fuji -- 7. Rare Biosphere in Human Gut: A less explored component of human gut microbiota and its association with human health -- 8. Metagenomic Insights into Microbial Diversity and Metabolic Potential of Hot Spring Ecosystems -- 9. Bioprospecting gastrointestinal microflora of common fishes for disease control in aquaculture -- 10. Marine sponge associated microbiome: reservoir of novel bioactive compounds -- 11. Metagenomic insights into herbivore gut: An application based perspective -- 12. Soil metagenomics: A tool for sustainable agriculture -- 13. Soil microbiome for enhanced crop productivity -- 14. Plant

associated microbial endophytes as promising source of biotechnological applications -- 15. Bifidobacterial Probiotics through Fermented Foods -- 16. Enterococci prevalent in processed food products: From probiotics to food safety -- 17. Fermented foods, microbiota and human health -- 18. Metagenomics of Fermented Foods: Implications on Probiotic Development -- 19. Probiotics from fermented foods -- 20. Dietary impacts on the composition of microbiota in human health and disease -- 21. Microfungi for the removal of toxic triphenylmethane dyes -- 22. Applied aspect of Microalgae in Monitoring of Heavy Metals.

Sommario/riassunto

The existence of living organisms in diverse ecosystems has been the focus of interest to human beings, primarily to obtain insights into the diversity and dynamics of the communities. This book discusses how the advent of novel molecular biology techniques, the latest being the next-generation sequencing technologies, helps to elucidate the identity of novel organisms, including those that are rare. The book highlights the fact that oceans, marine environments, rivers, mountains and the gut are ecosystems with great potential for obtaining bioactive molecules, which can be used in areas such as agriculture, food, medicine, water supplies and bioremediation. It then describes the latest research in metagenomics, a field that allows elucidation of the maximum biodiversity within an ecosystem, without the need to actually grow and culture the organisms. Further, it describes how human-associated microbes are directly responsible for our health and overall wellbeing.