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Nota di contenuto	1. Endophytic Fungi: Symbiotic Bioresource for Production of Plant Secondary Metabolites -- 2. Fungal endophytes as potential anticancer candidate over synthetic drugs: latest development and future prospects -- 3. Fungal endophytes as an alternative natural resource for the discovery of bioactive compounds of pharmacological importance -- 4. Pharmaceutically important fungal endophytes

associated with mushrooms: current findings and prospects -- 5. Biological synthesis of nanoparticles from fungal endophytes and their application in pharmaceutical industries -- 6. Fungal endophytes and their role in postharvest disease management -- 7. Fungal endophytes and their bioactive compounds: An overview of potential applications -- 8. Potential Anti-Malarial Compounds from Fungal Endophytes -- 9. Bioinformatics approach in studying the fungal endophyte derived bioactive compounds with pharmacological relevance -- 10. Omics based approaches in studying fungal endophytes and their associated secondary metabolites -- 11. Potential Antioxidant Compounds from Fungal Endophytes -- 12. Genetic, epigenetic and physicochemical strategies to improve pharmacological potential of fungal endophytes -- 13. Fungal Endophytes as biocontrol agents of plant pathogens -- 14. Fungal Endophytes as a sustainable source of Biomolecules: An overview with a focus to health aspects -- 15. Endophytic Fungi for Microbial Phytoremediation: Prospects for Agricultural and Environmental Sustainability.

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### Sommario/riassunto

Endophytes have unique characteristics to propagate inside host plants and aid the host by providing additional defense against environmental stresses and phytopathogens. Among endophytes, endophytic fungi have been recognized as a proliferating source for the production of bioactive compounds with potential in both the agricultural and health industries. Excessive use of pesticides in agriculture as well as in the food supply chain have led to increased antimicrobial resistance (AMR), which is one of the more serious global health concerns. Endophytic fungi and their associated bioactive substances have been reported to show natural ability to fight against pathogens and can reduce the development of AMR in nature. Studies also reported their potential as producers of hormones that enhance plant growth and several compounds having biological activities without any adverse effects. This book covers the pharmaceutical potential of fungal endophytes as elucidated through advanced bioinformatics tools and modern techniques. Also synthetic drugs are losing their efficacy to treat microbial-induced disease due to this emergence of drug-resistant microbes. Therefore, insight into the detection of valuable plant constituents is a pressing priority in order to achieve effective pharmaceutical treatments. This book provides a lucid discussion of the most recent research and provides knowledge about the applications of endophytic fungi with a specific focus to their pharmaceutical potential.

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