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Nota di contenuto	1. The Current Status of Population Extinction and Biodiversity Crisis of Medicinal Plants -- 2. Medicinal Plants and Bioactive Phytochemical Diversity: A Fountainhead of Potential Drugs against Human Diseases -- 3. Threats and opportunities for sustainable use of medicinal plants in Brazilian Atlantic Forest based on the knowledge of Indigenous Peoples and Local Communities -- 4. Climate Change Impact on Medicinal Plants: An Insight from the IUCN Red List Of Threatened Species -- 5. Securing Conservation Status of Paris Polyphylla, a Medicinally Important Plant of the Indian Himalayan Region -- 6. Endophytic Fungal Diversity in Solanaceous Medicinal Plants and Their Beneficial Impact -- 7. Genetic Studies on Threatened Medicinal Plants of Brazil: Mind the Gap -- 8. Medicinal Plants of North-east India: Biodiversity and Their Ethno-Medicinal Values -- 9. Strategies for Conservation and Sustainable Use of Medicinal Plants -- 10. Scientific Databases for Conservation of Medicinal Plants -- 11. International Trade of Medicinal and Aromatic Plants (MAPs) -- 12. Inventorization of Ecology, Ethnobotany and Conservation Status of Dactylorhiza hatagirea: Problems Progress and Prospects -- 13. Conservation and Sustainable Use of Medicinal Plants -- 14. Traditional Practices of Ethnomedicinal Plants in North-East Region of India and Their Conservation for Sustainable Utilization -- 15. Occurrence and Diversity of Major Naphthoquinones in Higher Plants: Their Distribution

and Conservation Strategies -- 16. *Astragalus fridae* genetic Source, Applications, and Conservation -- 17. *Tinospora cordifolia* as a Potential Candidate for Health Care Of Post-Menopausal Women -- 18. The Potential Role of Medicinal Plants, Traditional Herbal Medicines and Formulations to Overcome SARS-CoV-2 Induced Health Crisis -- 19. Bioactive Compounds from Medicinal Plants and Its Therapeutic Uses in the Traditional Health Care System -- 20. In-Vitro conservation and propagation of endangered Ethno-Medicinal Orchids from the Northeast Region of India -- 21. Artificial Seed Production and Cryopreservation Technology for Conservation of Plant Germplasm with Special Reference to Medicinal Plants -- 22. Biotechnological Studies on *Nasturtium Officinale* (Watercress) - An Endangered Species of Significant Relevance in Medicine, Cosmetic, and Food Industries -- 23. *Isatis tinctoria* L. (woad) – Cultivation, Phytochemistry, Pharmacology, Biotechnology, and Utilization -- 24. Tissue Culture Techniques to Conserve Endangered Medicinal Plants with Antimicrobial and Antiviral Activities -- 25. Insights into the In Vitro Approaches for the Production of Secondary Metabolites Towards The Conservation of Medicinal Orchids -- 26. Biotechnological Approaches for Ex Situ Conservation of Medicinal Plants -- 27. Conservation of Medicinal Plants by Tissue Culture Techniques -- 28. Current Status of Metabolic Engineering of Medicinal Plants for Production of Plant-derived Secondary Metabolites -- 29. Stationary, Agitated and Bioreactor Cultures of *Verbena officinalis* L. (Common Vervain) - A Potential Rich Source of Bioactive Phenolic Compounds for Pharmacy, Health Food Industry and Cosmetology.

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#### Sommario/riassunto

This contributed volume provides a comprehensive, in-depth and subject-based reviews on the current status of active ingredients, sustainable use, biodiversity and conservation of certain endangered medicinal plants. The book also explores conventional and non-conventional biotechnological interventions for their biodiversity conservation. Medicinal plants have been used in worldwide as a major source of raw material for the traditional herbal healthcare practices as well as for drug discovery and development in pharmaceutical industry. The cumulative consequences of various human activities and environmental factors cause decline in the biodiversity of medicinal plants at an unprecedented rate worldwide. Thus, the overall understanding of ecology, species and genetic diversity along with assessment of the status of different threats and their impact on medicinal plants is crucial to sustain existing biodiversity, its utilization and conservation. All the latest advancements in the biotechnological approaches for the conservation research of endangered medicinal plants and the future perspectives have been described. This book provides comprehensive reviews spreading over about 25 chapters divided in three sections. The chapters of this book are written by recognized scientists in their respective fields which are useful to students, academicians, researchers, botanists, biotechnologists, policy makers, conservationists and industries interested in biodiversity conservation and medicinal plant research for the production of secondary metabolites.

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