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Nota di contenuto	1: Climbers: Evolution and Diversification in Angiosperm -- 2: Biodiversity Conservation with Special Reference to Medicinal Climbers: Present Scenario, Challenges, Strategies and Policies -- 3: Medicinal Importance of Climbers Used In Unani System of Medicine -- 4: Climber Plants: Medicinal Importance and Conservation Strategies -- 5: Plant Tissue Culture: Profile of Pioneers -- 6: Mircopropagation: A Boon for Conservation of Valuable Vines and Lianas -- 7: Somatic Embryogenesis: A Valuable Strategy for Phyto-Climbing Diversity Conservation -- 8: Biotechnological Perspectives towards Improvement of Decalepishamiltonii, Potential Applications of Its tubers And Bioactive Compounds of Nutraceuticals for Value Addition -- 9: Tylophora indica (Burm. f.) Merrill: Medicinal Uses, Propagation and Replenishment -- 10: In Vitro Strategies for the Conservation of Some

Medicinal and Horticultural Climbers -- 11: Advancement in Encapsulation Techniques for Conservation of Climbers -- 13: Basic Principles behind Genetic Transformation in Plants -- 14: Genetic Transformation for Quality Improvement of Ornamental Climbers -- 15: Advances in Molecular Approaches for the Integrative Genetic Transformation of Highly Important Climbers -- 16: Molecular Markers and their Applications in Plant Biotechnology -- 17: Use of Molecular Markers in Medicinal Climber -- 18: Selective Protocols for In Vitro Propagation of Threatened Medicinal Climbers -- 19: In Vitro Protocols for Ornamental Climbers -- 20: Contribution of Biotechnology in the Enhancement of Secondary Metabolites in Selected Medicinal Climbers.

Sommario/riassunto

Since time immemorial human beings are utilizing plants, apart from food and shelter, as medicine to cure ailments and ornamentals as aesthetic value. The recognized plants for medicinal uses mostly belong to tree, shrub and herbs, but there is another group of plants categorized as "CLIMBERS". The climbing habit is a key innovation in angiosperms evolution. Climbing plant taxa have greater species richness than their non-climbing sister groups. Although it is considered as highly diversified clades but a much neglected group of the plants. In contrast with either erect or prostrate species, which occupy a narrow range of the light, climbers may use a very broad range of light availability. With the occupation of such an expanded ecological niche-ranging from forest floor to understory to forest canopy- a greater exposure to different pollinator, fruit/seed dispersers and herbivores would be granted. Almost one-third of the plant families includes climbers and contributes significantly to the function of any forest system. Climbers are not well investigated by the researchers, however considerable information has been gathered in this book, which delineates for the researchers and readers to exploit medicinal and ornamental climbers for their benefit. As concerted efforts have not been made to popularize climbers for medicinal and aesthetic uses, the contributions made in this book will provide a platform to move ahead for better utilization of climbers in the service of human beings. This book offers an insightful look on different biotechnological interventions for the conservation of medicinal and ornamental climbers. The book starts with a discussion on the evolution and diversification of climbers among the angiosperms. Thereafter chapters describe various approaches of conservation, biotechnological strategies like micropropagation, synseed production, genetic transformation for the quality improvement, production of bioactive compounds under in vitro conditions. This book also provides a compilation of standardized in vitro micropropagation protocols for some threatened climbers. It also includes chapters on various molecular markers and their application in medicinal and ornamental climbers for their desired improvement. The book provides an essential information for advanced students, teachers and research scientists in the field of plant biotechnology, pharmaceutical industries and medical sciences.
