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Nota di contenuto	1. Bioengineering for production of biological active compounds in Plants -- 2. Molecular alterations for the enhancement of natural products in plants -- 3. Enhancement of Natural products in plant in the Post-Genomics Era: The new era of natural drug discovery -- 4. Biotechnology Towards improvement of Plants for Enhancement of natural products -- 5. CRISPR-based plants improvements for boosting the natural products -- 6. RNAi interference mechanism and application in plants for enhancement of natural products -- 7. In Silico Characterization of Natural Products in Plants -- 8. Integrated high throughput omics approaches in production of Natural Products in Plant -- 9. Production of Plant Derived Natural Compounds through Hairy Root Culture -- 10. Synthetic biology of plants derived medicinal natural products -- 11. Plant Cell and Tissue Culture: Propagation, Improvement, and Conservation of Medicinal Plants -- 12. Advanced Systems and Bioreactors for Large-scale Secondary Metabolite Production in Medicinal Plants Using Suspension Cultured Cells -- 13. Exploring molecular diversity of plants for enhancement of natural products -- 14. Conventional approaches towards improvement of

Plants for Enhancement of natural products Production -- 15. Bioengineering Strategy for production of plant based high valued natural products -- 16. Biosynthesis and Synthetic Biology of Fluorinated Products in Plants -- 17. Progress in the Secondary Metabolite Production in Medicinal Plants - An Overview.

Sommario/riassunto

This book discusses the importance of plants in terms of their natural bioactive products and medicinal, nutraceutical and health benefits. Plants are natural sources of many pharmaceutical compounds used in traditional and modern medicine, and their mass production and efficient use is imperative in view of the new emerging diseases. This book covers breakthroughs in the research of plant natural products by focusing on how different state-of-the-art biotechnologies facilitate their discovery, the molecular basis of their biosynthesis, as well as synthetic biology. Research on plant's natural products in the pre-genomic era was focused on discovering bioactive molecules with pharmaceutical activities, and identifying individual genes responsible for biosynthesis. In the post-genomics era, however, integration of inter-disciplinary approaches and detailed analysis of all accessible data from multi-informatics is necessary. This would accelerate the full characterization of biosyntheticand regulatory circuit for producing plant natural products. This book is an important reference book for the researchers working in the field of plant natural products and pharmaceutical industries at global level.