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Titolo	Tropane alkaloids : pathways, potential and biotechnological applications // Vikas Srivastava, Shakti Mehrotra, Sonal Mishra, editors
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Nota di contenuto	Part 1. Tropane Alkaloids: Diversity, Biosynthesis and Significance -- Chapter 1. Plant Tropane Alkaloids (TAs): Chemotaxonomic Significance, Biogenesis and Biotechnological interventions -- Chapter 2. Structure and Function of Enzymes Involved in the Biosynthesis of Tropane Alkaloids -- Chapter 3. Plant tropane alkaloids: Commercial stature and production developments -- Part 2. Tropane Alkaloids: In vitro and allied interventions -- Chapter 4. Involvement of various biotechnological contrivances for tropane alkaloids biosynthesis and applications of tropane alkaloid bearing in vitro cultures -- Chapter 5. Biotechnological Production of Tropane Alkaloids: Contribution of Hairy Root Cultures -- Chapter 6. Production of Tropane Alkaloids (TAs) in plant and in vitro cultures of different ploidy levels -- Chapter 7. Current Progress in Tropane Alkaloids Production by Transgenic and Heterologous gene Expression Approaches -- Chapter 8. Tropane Alkaloid Biosynthesis in Plants: Insights from Transcriptome Analysis -- Chapter 9. Transcription Factor and MicroRNA-mediated Manipulation of the Tropane Alkaloids Biosynthesis. .
Sommario/riassunto	This book covers the current research on the biochemistry and biotechnological applications of plant-based Tropane alkaloids. Tropane alkaloids (TA) belong to the world's oldest phytomedicines with their valuable ethno-pharmacological applications. The book compiles scientific ideas, perspectives and challenges in the application of TA in the present day. The book also provides case studies of Tropane

alkaloid bearers. The book attempts to investigate the loop holes in existing methodologies, challenges and possible solutions through well thought-out scientific discussions from various eminent research groups. The book is split into three major sections. The first section includes an overview of Tropane alkaloids and their biosynthesis. This section addresses the biogenesis, evolutionary and ecological perspectives and enzymes in TA biosynthesis. The second section covers aspects of genetic tools and biotechnological interventions in tropane alkaloid bearing plants. The third section presents various case studies in TA. This book is of high interest to students and researchers in biotechnology, plant biology and pharmacology. Alkaloids are of high medicinal value, and therefore, this book is an interesting read for industry experts, too.
