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Nota di contenuto	Part I. Theory and Technology -- Nutraceutical compounds, classification and function -- Plant cell culture utilization in bioactive compounds production -- Scale up production of bioactive compounds using bioreactors -- Factors affecting in vitro production of nutraceuticals -- Part 2.-In vitro production of nutraceutical compounds -- In vitro production of Polyphenols -- In vitro production of Alkaloids -- In vitro production of Coumarins -- In vitro production of Terpenoids and Isopernoids -- In vitro production of Anthocyanins and Carotenoids -- In vitro production of Saponins -- In vitro production of Steroids -- In vitro production of Tocopherols -- In vitro production of Phytosterols -- In vitro production of Quinones -- Part 3 -- Strategic Advances and Challenges -- Mutagenesis and in vitro cell selection for enhanced production of nutraceuticals -- Optimization of in vitro cell culture conditions for increasing biomass and nutraceutical production -- Genetic engineering in cell culture for enhanced production of nutraceuticals -- Transfer of plant biosynthetic pathways to microbes for the production of nutraceuticals -- In vitro production of nutraceutical: challenges and opportunities. .

Sommario/riassunto

This book focuses on in vitro techniques and challenges of producing nutraceutical compounds from plant cells. In addition, it provides an overview of different biosynthesis pathways and their modulation through cell culture techniques for the production of nutraceutical compounds in high quantity and quality. It also includes the assessment of the factors influencing production and advances in cell culture techniques, including the scale-up approach using bioreactors. Lastly it provides valuable suggestion for future research.