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Titolo	The Gentianaceae - Volume 2: Biotechnology and Applications / / edited by Jan J. Rybczyski, Michael R. Davey, Anna Mikua
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ISBN	3-642-54102-X
Edizione	[1st ed. 2015.]
Descrizione fisica	1 online resource (467 p.)
Disciplina	570 570.28 631.52 660.6
Soggetti	Plant breeding Biotechnology Biology—Technique Plant Breeding/Biotechnology Biological Techniques
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references at the end of each chapters and indexes.
Nota di contenuto	Systems of plant regeneration in gentian in vitro cultures -- In vitro manipulation and propagation of Gentiana L. species from the Ukrainian flora -- In vitro studies and biotechnology of Taiwan native species of family Gentianaceae -- Biotechnology and phytochemistry of Gentianella species from the central regions of the Balkan Peninsula -- The role of arabinogalactan proteins in Centaurium erythraea Rafn morphogenesis in vitro -- Somatic embryogenesis in long-term cultures of Gentiana lutea L. in the presence of osmotic stress -- Protoplast culture and somatic cell hybridization of gentians -- Haploid and doubled haploid plants production in gentian (Gentiana spp.) -- Genetic variation induced by tissue and organ culture in Gentiana species -- Molecular breeding of Japanese gentians - Applications of genetic transformation, metabolome analyses, and genetic markers -- Cryopreservation of Gentianaceae: trends and applications

	-- Postharvest physiology of flowers from family Gentianaceae -- Tissue and organ cultures of gentians as potential sources of xanthones and flavonoids -- Bioactive secondary metabolites in several genera of the Gentianaceae species from the central region of Balkan Peninsula -- Profiling, isolation, chemical characterisation and distribution of Gentianaceae constituents -- Phytochemistry and Biotechnological Approches -- Gentianae radix -- Gentians used in South America as antimalarial agents.
Sommario/riassunto	This book, the second of two volumes on the Gentianaceae, is devoted to aspects of biotechnology and their applications. It consists of 18 chapters and covers micropropagation by means of organogenesis or somatic embryogenesis, and single cell manipulation of various species belonging to the horticultural genera Blakstonia, Centaurium, Gentiana, Gentianalla and Swertia. Furthermore, the application of somatic cell hybridization, haploidization and genetic variation arising from tissue and organ culture for the production of plants with new horticultural traits, such as new flower colors or sizes, or with special pharmaceutical values, is treated in detail. Also discussed are molecular markers that facilitate breeding and cultivar identification, the preservation of genetic resources by cryopreservation, the postharvest physiology of cut Gentian flowers and potted plants, and different analytical methods for the evaluation of Gentians as sources of secondary metabolites, such as xanthones and flavonoids, secoiridoids and C-glucoflavonoids, and their positive impacts on human health. This volume as well as the companion book The Gentianaceae – Volume 1: Characterization and Ecology will serve as key reference works for scientists and students in the fields of botany, plant breeding, biotechnology and horticulture, as well as professional gardeners.