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Autore	Neumann K.-H (Karl-Hermann), <1936->
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Nota di contenuto	Introduction -- Historical Developments of Cell and Tissue Culture Techniques -- Callus Cultures -- Cell Suspension Cultures -- Protoplast Cultures -- Haploid Techniques -- Plant Propagation: Meristem Cultures, Somatic Embryogenesis Micropropagation, and Transformation of Somatic Embryos in Bioreactors -- Some Endogenous and Exogenous Factors in Cell Culture Systems -- Primary Metabolism -- Secondary Metabolism -- Phytohormones and Growth Regulators -- Cell Division, Cell Growth, Cell Differentiation -- Genetic Problems and Gene Technology -- Summary of Some Physiological Aspects in the Development of Plant Cell and Tissue Culture.
Sommario/riassunto	This textbook is clearly structured with fourteen richly illustrated chapters and practical examples for easy understanding and direct implementation. The methods and findings developed in the authors' group are presented in detailed, revised chapters. Readers will find valuable updates on the molecular basis of biotechnological processes, secondary metabolite production and genetic engineering. In addition, the basic principles of important biotechnologies, as well as examples of specially designed crops that deliver improved productivity under stress conditions, are presented. This second edition sets the direction for future research on the basic aspects of plant tissue culture and its applications in the fields of secondary metabolite production and

genetic engineering. It provides both general and specific information for students, teachers, academic researchers and industrial teams who are interested in new developments in plant tissue culture and its applications. .