1. Record Nr. UNINA9910144559603321

Titolo	Flow cytometry with plant cells [[electronic resource]] : analysis of genes, chromosomes and genomes / / edited by Jaroslav Dolezel, Johann Greilhuber, and Jan Suda
Pubbl/distr/stampa	Weinheim, : Wiley-VCH Chichester, : John Wiley [distributor], 2007
ISBN	1-280-92167-6 9786610921676 3-527-61092-8 3-527-61093-6
Descrizione fisica	1 online resource (481 p.)
Altri autori (Persone)	DolezelJaroslav GreilhuberJohann SudaJan
Disciplina	571.62
Soggetti	Flow cytometry Plant cells and tissues Electronic books.
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 and index.
Nota di contenuto	Flow Cytometry with Plant Cells; Contents; Preface; List of Contributors; 1 Cytometry and Cytometers: Development and Growth; Overview; 1.1 Origins; 1.2 From Absorption to Fluorescence, from Imaging to Flow; 1.2.1 Early Microspectrophotometry and Image Cytometry; 1.2.2 Fluorescence Microscopy and the Fluorescent Antibody Technique; 1.2.3 Computers Meet Cytometers: The Birth of Analytical Flow Cytometry; 1.2.4 The Development of Cell Sorting; 1.3 The Growth of Multiparameter Flow Cytometry; 1.4 Bench-tops and Behemoths: Convergent Evolution; 1.5 Image Cytometry: New Beginnings?; References 2 Principles of Flow CytometryOverview; 2.1 Introduction; 2.2 A Brief History of Flow Cytometry; 2.3 Components of a Flow Cytometer; 2.3.1 Fluidics; 2.3.2 Optics; 2.3.3 Electronic Systems; 2.4 Flow Cytometric Informatics; 2.5 Spectral Compensation; 2.6 Cell Sorting; 2.7

Calibration Issues; 2.8 Conclusions; References; 3 Flow Cytometry with Plants: an Overview; Overview; 3.1 Introduction; 3.2 Fluorescence is a Fundamental Parameter; 3.3 Pushing Plants through the Flow Cytometer; 3.3.1 Difficulties with Plants and their Cells; 3.3.2 Protoplasts are somewhat ""Easier"" than Intact Cells
3.3.3 Going for Organelles3.4 Application of Flow Cytometry in Plants; 3.4.1 Microspores and Pollen; 3.4.2 Protoplasts; 3.4.2.1 Physiological Processes; 3.4.2.2 Secondary Metabolites; 3.4.2.3 Gene Expression; 3.4.2.4 Somatic Hybrids; 3.4.2.5 DNA Transfection; 3.4.3 Cell Nuclei; 3.4.3.1 Ploidy Levels; 3.4.3.2 Aneuploidy; 3.4.3.3 B Chromosomes; 3.4.3.4 Sex Chromosomes; 3.4.3.5 Cell Cycle and Endopolyploidy; 3.4.3.6 Reproductive Pathways; 3.4.3.7 Nuclear Genome Size; 3.4.3.8 DNA Base Content; 3.4.3.9 Chromatin Composition; 3.4.3.10 Sorting of Nuclei; 3.4.4 Mitotic Chromosomes; 3.4.5 Chloroplasts
3.4.6 Mitochondria3.4.7 Plant Pathogens; 3.4.8 Aquatic Flow Cytometry; 3.5 A Flow Cytometer in Every Laboratory?; 3.6 Conclusions and Future Trends; References; 4 Nuclear DNA Content Measurement; Overview; 4.1 Introduction; 4.2 Nuclear DNA Content: Words, Concepts and Symbols; 4.2.1 Replication-Division Phases; 4.2.2 Alternation of Nuclear Phases; 4.2.3 Generative Polyploidy Levels; 4.2.4 Somatic Polyploidy; 4.3 Units for Presenting DNA Amounts and their Conversion Factors; 4.4 Sample Preparation for Flow Cytometric DNA Measurement; 4.4.1 Selection of the Tissue; 4.4.2 Reagents and Solutions
4.4.2.1 Isolation Buffers and DNA Staining4.5 Standardization; 4.5.1 Types of Standardization; 4.5.2 Requirement of Internal Standardization - a Practical Test; 4.5.3 Choice of the Appropriate Standard Species; 4.5.3.1 Biological Similarity; 4.5.3.2 Genome Size; 4.5.3.3 Nature of the Standard; 4.5.3.4 Availability; 4.5.3.5 Cytological Homogeneity; 4.5.3.6 Accessibility; 4.5.3.7 Reliability of C-Values; 4.5.4 Studies on Plant Standards; 4.5.5 Suggested Standards; 4.6 Fluorescence Inhibitors and Coatings of Debris; 4.6.1 What are Fluorescence Inhibitors and Coatings of Debris?
4.6.2 Experiments with Tannic Acid

Sommario/riassunto

Targeted at beginners as well as experienced users, this handy reference explains the benefits and uses of flow cytometery in the study of plants and their genomes. Following a brief introduction that highlights general considerations when analyzing plant cells by flow cytometric methods, the book goes on to discuss examples of application in plant genetics, genomic analysis, cell cycle analysis, marine organism analysis and breeding studies.With its list of general reading and a glossary of terms, this first reference on FCM in plants fills a real gap by providing first-hand practical hin

2. Record Nr. UNIORUON00221254

Titolo	Recreation and the sea / edited by Stephen Fisher
Pubbl/distr/stampa	Exeter, : University of Exeter Press, 1997. IX, 181 p. ; 24 cm.
ISBN	08-598-9540-8
Soggetti	Mare - Studi
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia