1. Record Nr. UNINA9910829861003321

Titolo	Plant proteomics [[electronic resource]] : technologies, strategies, and applications / / edited by Ganesh Kumar Agrawal, Randeep Rakwal
Pubbl/distr/stampa	Hoboken, N.J., : J. Wiley, c2008
ISBN	1-281-83132-8 9786611831325 0-470-36963-9 0-470-36983-3
Descrizione fisica	1 online resource (818 p.)
Collana	Wiley-Interscience series in mass spectrometry
Altri autori (Persone)	AgrawalGanesh Kumar RakwalRandeep
Disciplina	572 572.62
Soggetti	Plant proteins Plant proteomics
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	PLANT PROTEOMICS; CONTENTS; PREFACE; CONTRIBUTORS; ACRONYMS AND ABBREVIATIONS; 1 AN INTRODUCTION TO PROTEOMICS: APPLICATIONS TO PLANT BIOLOGY; 1.1 Proteomics Defined; 1.2 Proteomics Applied; References; PART I TECHNOLOGIES; 2 GEL-BASED PROTEOMICS; 2.1 Introduction and Brief Bibliographic Review; 2.2 SDS-PAGE; 2.3 IEF; 2.4 2D Maps; 2.5 Conclusions; 2.6 Five-Year Viewpoint; References; 3 MASS SPECTROMETRY-BASED PROTEOMICS: IDENTIFYING PLANT PROTEINS; 3.1 Introduction and Brief Bibliographic Review; 3.2 Instrumentation; 3.3 MALDI; 3.4 ESI; 3.5 Mass Analyzers; 3.6 Ion Detectors 3.7 Sample Preparation3.8 Protein Identification; 3.9 Conclusions; 3.10 Five-Year Viewpoint; References; 4 CHEMICAL PROTEOMICS; 4.1 Introduction; 4.2 Strategies For Activity-Based Protein Profiling (ABPP); 4.3 Case Study: Development of Molecular Tools Targeting Plant Kinases; 4.4 Conclusions; 4.5 Five-Year Viewpoint; References; 5 THE ARABIDOPSIS LOCALIZOME: SUBCELLULAR PROTEIN LOCALIZATION AND INTERACTIONS IN ARABIDOPSIS; 5.1 Protein Compartmentalization in

Plant Cells; 5.2 Experimental Determination of Protein Localization
5.3 In Vivo Imaging Approaches to Protein Localization and Interaction5.4 Plant Cell Cultures for Studying Protein Localization; 5.5 Protein-Protein Interaction In Vivo: FRET; 5.6 Perspectives: Integrating Predictive and Experimental Protein Localization Data; References; 6 SECRETOME: TOWARD DECIPHERING THE SECRETORY PATHWAYS AND BEYOND; 6.1 Introduction and Brief Bibliographic Review; 6.2 Methodology and Strategy; 6.3 A Case Study: In Planta and In Vitro Protein Profiles of Soluble and Secreted Proteins in Rice; 6.4 Conclusions; 6.5 Five-Year Viewpoint; References; 7 PEPTIDOMICS
7.1 Introduction and Brief Bibliographic Review7.2 Separation Technology; 7.3 MS Technology; 7.4 Bioinformatics and Data Mining; 7.5 Differential Peptide Display; 7.6 ID LC-MALDI; 7.7 2D CA-RP-LC-ESI-MS; 7.8 Applications; 7.9 Peptides and Proteases; 7.10 Conclusions; 7.11 Five-Year Viewpoint; References; PART II COMPUTATIONAL PROTEOMICS; 8 BIOINFORMATICS IN GEL-BASED PROTEOMICS; 8.1 Introduction and Brief Bibliographic Review; 8.2 Methodology and Strategy; 8.3 Experimental Results and Applications; 8.4 Conclusions; 8.5 Five-Year Viewpoint; References; 9 BIOINFORMATICS IN MS-BASED PROTEOMICS
9.1 Introduction9.2 Database Searching; 9.3 Peptide De Novo Sequencing; 9.4 Conclusions and Five-Year Viewpoint; References; PART III EXPRESSION PROTEOMICS; 10 AN OVERVIEW OF THE ARABIDOPSIS PROTEOME; 10.1 Introduction and Brief Bibliographic Review; 10.2 Methodology and Strategy; 10.3 Experimental Results and Applications; 10.4 Conclusions; 10.5 Five-Year Viewpoint; References; 11 RICE PROTEOME AT A GLANCE; 11.1 Introduction and Brief Bibliographic Review; 11.2 Methodology and Strategy; 11.3 Experimental Results and Applications; 11.4 Conclusions; 11.5 Five-Year Viewpoint; References
12 PROTEOMICS OF LEGUME PLANTS

Sommario/riassunto

Confidently face the challenges of proteomics research specific to plant science with the information in Plant Proteomics, which will introduce you to the techniques and methodologies required for the study of representative plant species. Read about proteomics studies in Arabidopsis, rice, and legumes and find information about common technologies like mass spectrometry and gel electrophoresis. Discover expression proteomics, functional proteomics, structural proteomics, bioinformatics, and systems biology, understand how to conduct proteomics studies in developing countries and underf