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Titolo	Plant Metabolomics : Methods and Applications / / edited by Xiaoquan Qi, Xiaoya Chen, Yulan Wang
Pubbl/distr/stampa	Dordrecht : , : Springer Netherlands : , : Imprint : Springer, , 2015
ISBN	94-017-9291-7
Edizione	[1st ed. 2015.]
Descrizione fisica	1 online resource (321 p.)
Disciplina	570 571.6 580 581.35
Soggetti	Plant science Botany Plant genetics Metabolism Plant Sciences Plant Genetics and Genomics Metabolomics
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.
Nota di contenuto	Overview -- Gas Chromatography Mass Spectrometry Coupling Techniques -- LC-MS in Plant Metabolomics -- Nuclear Magnetic Resonance Techniques -- Multivariate Analysis of Metabolomics Data -- Metabolomic data processing based on mass spectrometry platforms -- Metabolite Qualitative Methods and the Introduction of Metabolomics Database -- Plant Metabolic Network -- Applications of LC-MS in plant metabolomics -- Application of Metabolomics in the Identification of Chinese Herbal Medicine -- Metabolomics based Studies on Artemisinin Biosynthesis -- NMR-Based Metabolomic Methods and Applications -- Metabolomics research of quantitative disease resistance against barley leaf rust.
Sommario/riassunto	This book introduces plant metabolomics, an experimental approach that is important in both functional genomics and systems biology. It

can be argued that metabolite data is most closely linked to phenotypes and that changes in metabolite content or metabolic networks can therefore indicate gene function more directly than mRNA transcript or protein based-approaches. Additionally, the identification of metabolic markers has important applications in plant breeding. The book, written by researchers who are active in plant metabolomics in China, not only introduces the fundamental concepts and the latest methodological advances in the field of plant metabolomics, but also details new studies from the respective scientific programs of the authors and thus reflects the current state of domestic plant metabolomics research. Professor Xiaoquan Qi is the principal investigator at the Institute of Botany, CAS. Professor Xiaoya Chen is a member of the Chinese Academy of Science and also is the principal investigator at the Shanghai Institutes for Biological Sciences, CAS. Professor Yulan Wang is leading a team in BioSpectroscopy and Metabolomics at the Wuhan Institute of Physics and Mathematics, CAS.