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Titolo	The Mycota . II Genetics and biotechnology : a comprehensive treatise on fungi as experimental systems for basic and applied research / / edited by K. Esser
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Edizione	[Third edition.]
Descrizione fisica	1 online resource (XXII, 452 p. 59 illus., 42 illus. in color.)
Collana	Mycota ; ; II
Disciplina	660.62
Soggetti	Fungi - Biotechnology Fungi - Genetics Fungal molecular biology
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and indexes.
Nota di contenuto	Chromatin Structure and Function in Neurospora crassa -- Origin, function and transmission of accessory chromosomes -- Genetics of the unfolded protein response in fungi -- From genetics to molecular oscillations: the circadian clock in Neurospora crassa -- small RNAs in fungi -- NLR function in fungi as revealed by the study of self/non-self recognition systems -- Genetics and genomics decipher partner biology in arbuscular mycorrhizas -- Coordination of fungal secondary metabolism and development -- Fungal Genomics -- Filamentous fungi as hosts for heterologous production of proteins and secondary metabolites in the post-genomic era -- New Avenues towards drug discovery in fungi -- Exploiting fungal photobiology as a source of novel bio-blocks for optogenetic systems -- Yeast cell factories -- Engineering Saccharomyces cerevisiae for production of fatty acids and their derivatives -- Fungi Involved in the Biodeterioration and Bioconversion of Lignocellulose Substrates -- Biotechnology of marine fungi: New workhorses and new uses - using marine fungal diversity as a source for biotechnology -- The biotechnological potential of anaerobic gut fungi.
Sommario/riassunto	The Series The fungi represent a heterogenous assemblage of

eukaryotic microorganisms and have become favored organisms for research at the cellular and molecular level. Such research involvement has been stimulated by interest in the biotechnological application of fungi in processes related to industry, agriculture and ecology. Considering both yeasts and mycelial fungi, The Mycota highlights developments in both basic and applied research and presents an overview of fungal systematics and cell structure. Foremost authorities in research on mycology have been assembled to edit and contribute to the volumes. This Volume The first section of this volume, Genetics, illustrates the basic genetic processes underlying inheritance, cell biology, metabolism and “lifestyles” of fungi. The second section, Biotechnology, addresses the applied side of fungal genetics, ranging from new tools for synthetic biology to the biotechnological potential of fungi from diverse environments. Gathering chapters written by reputed scientists, the book represents an invaluable reference guide for fungal biologists, geneticists and biotechnologists alike.