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Titolo	Growth, Differentiation and Sexuality // edited by Jürgen Wendland
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2016
ISBN	3-319-25844-3
Edizione	[3rd ed. 2016.]
Descrizione fisica	1 online resource (526 p.)
Collana	The Mycota, A Comprehensive Treatise on Fungi as Experimental Systems for Basic and Applied Research ; ; 1
Disciplina	570
Soggetti	Mycology Microbial genetics Microbial genomics Developmental biology Microbial Genetics and Genomics Developmental Biology
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 and indexes.
Nota di contenuto	Organelle Inheritance in Yeast and Other Fungi -- Nuclear Dynamics and Cell Growth in Fungi -- Hyphal Tip Growth in Filamentous Fungi -- Septation and Cytokinesis in Pathogenic Fungi -- The Ascomycetous Cell Wall, From a Proteomic Perspective -- Heterogenic Incompatibility in Fungi -- The Art of Networking: Vegetative Hyphal Fusion in Filamentous Ascomycete Fungi -- Molecular control of fungal senescence and longevity -- Autoregulatory Signals in Mycelial Fungi -- Pheromone Action in the Fungal Groups Chytridiomycetes, and Zygomycetes, and in the Oophytes -- Photomorphogenesis and gravitropism in fungi -- Asexual sporulation in Agaricomycetes -- The Mating Type Genes of the Basidiomycetes -- Mating-Type Structure, Function, Regulation and Evolution in the Pezizomycotina -- Fruiting body formation in Basidiomycetes -- Sexual development in fungi -- Sexual development in Trichoderma -- Velvet Regulation of Fungal Development.
Sommario/riassunto	This new edition offers detailed overviews covering a wide area of

fungal growth and reproduction on the mechanistic and molecular level. It includes 18 chapters by eminent scientists in the field and is – like the previous edition – divided into the three sections: Vegetative Processes and Growth, Signals in Growth and Development, and Reproductive Processes. Major topics of the first section include dynamic intracellular processes, apical growth, hyphal fusion, and aging. The second section analyses autoregulatory signals, pheromone action, and photomorphogenesis and gravitropism abiotic signals. The third section reveals details of asexual and sexual development in various fungal model systems, culminating in fruit body formation in basidiomycetes, which is a sector of growing economic potential. Since the publication of the first edition of this volume in 1994 and the second edition in 2006, the field of fungal biology has continued to expand thanks to improvements in omics technologies and the application of genetic tools to an increasing variety of fungal models. Several additional chapters by a new generation of fungal biologists discuss this diversity and guarantee lively reading.
