Record Nr. UNINA9910253862303321

Titolo Biology of Microfungi / / edited by De-Wei Li

Pubbl/distr/stampa Cham:,: Springer International Publishing:,: Imprint: Springer,,

2016

ISBN 3-319-29137-8

Edizione [1st ed. 2016.]

Descrizione fisica 1 online resource (651 p.)

Collana Fungal Biology, , 2198-7777

Disciplina 570

Soggetti Microbiology

Mycology

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

What are microfungi (Introduction)? -- Fungal nomenclature changes and its significance to fungal taxonomy and naming of microfungi -- DNA sequencing and development of fungal systematics -- Conidiogenesis and phylogenetic relationships of anamorphic fungi --

Conidiogenesis and phylogenetic relationships of anamorphic fungi --Molecular techniques and microfungi biodiversity studies -- What roles played by microfungi in nature (Microfungi, plants and our planet)? --Symbiotic relationship of microfungi and plants -- Endophytic fungi of woody plants -- Diversity of Hyphomycetes in soil -- Airborne microfungi and their strategies and mechanisms of release and dispersal -- Microfungi in indoor environments -- Marine fungi, an under-charted territory -- Aquatic fungi and their role in ecosystem --Anamorphs of Basidiomycetes (Polyporaceae) -- Mycotoxins and secondary metabolites produced by microfungi -- Microfungi with medicinal properties and their roles in pharmaceutical research --Allergenic and pathogenic microfungi and human health -- Microfungi and food/vegetable and food products (soy sauce, bread, cheese, jiaobai, miso, Tempeh, doufuru, mantou, baozi,) -- Microfungi and fermentation (alcoholic beverages) -- Green life style with microfungi -composting -- Microfungi-can these fungi be an alternative source for biofuel? -- Pollen, pollinators and fungal dispersal -- Enzymes produced by microfungi and their industrial significance

(Biotechnology, microfungi and industrial applications) -- Recent major plant diseases caused by microfungi -- Bat white nose syndrome and

diminishing populations of bats in the USA -- Wood blue stain fungi and their significance -- Biocontrol of phytopathogens, insects, nematodes, and weeds using microfungi. List of Contributors (Most have confirmed) A. Elizabeth Arnold, University of Arizona, Tucson, AZ, USA Adnan Uzunovic, Taiga Forest Health, Durability and Protection, Vancouver, BC, Canada Bärlocher F, Mount Allison University, Sackville, New Brunswick, Canada Behr, M., New York Department of Health, Albany, NY, USA Blehert, D. S., National Wildlife Health Center, Madison, Wisconsin, USA Buckles, E. L., Cornell University, Ithaca, NY, USA Chin Yang, Prestige EnviroMicrobiology, Voorhees, NJ, USA Darling, S. R., Vermont Fish and Wildlife Department, Rutland, VT, USA David Bass. University of Oxford, UK David Hibbett, Clark University, Worchester, MA, USA Deborah Waters, University College Cork, Ireland Dian-Qing Yang, FPInnovations, Quebec, Canada Donat Magyar, Head of Department at National Institute of Environmental Health, Department of Aerobiological Monitoring, Hungary Eric McKenzie, Landcare Research Manaaki Whenua, Lincoln, New Zealand Gary Peng, Agricultural and Agri-Food Canada, Saskatoon, Saskatchewan, CA Glaucia M. Pastore, State University of Campinas, Campinas, Brazil Guy Leonard, The Natural History Museum, London, UK James Scott, University of Toronto, Ontario, CA John Klironomos, University of Guleph, Ontario, Canada Kevin Hyde, Mae Fah Luang University, Muang District, Thailand Liming Xia, Institute of Bioengineering, Zhejiang University, Hangzhou, China Meredith D.M. Jones, School of Biosciences, University of Exeter, UK Summerbell Richard, Sporometrics, Toronto, Ontaro, CA Tony Byrne, National Resources Canada, Victoria, British Columbia, Canada Wenping Wu, R&D Director & Deng Jun, IPR Manager, Novozymes China Xingzhong Liu, State Key Laboratory of Mycology, Chinese Academy of Sciences, Beijing, China Yong Wang, Texas A&M University, College Station, TX Yucheng Dai, Institute of Microbiology, Beijing Forestry University, Beijing, China Zheng Wang, Yale University, New Haven, CT, USA.

## Sommario/riassunto

This book principally covers the latest development of research on microfungi from both systematic and practical aspects. Microfungi are in our daily life, but we normally do not realize their presence. Without microfungi we would not be able to enjoy our baked food, fermented food, preserved food, alcoholic beverages, and access to some modern medication, such as penicillin and cyclosporine, which are secondary metabolites of microfungi. Recent advances in mycology presented in this book will be useful to identify the needs in mycological research and to determine the direction or niches for future research.