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Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Fungal Transformation: From Protoplasts to Targeted Recombination Systems -- Protoplast Transformation for Genome Manipulation in Fungi -- Trichoderma Transformation Methods -- Transformation of Mucor circinelloides f. lusitanicus Protoplasts -- Transformation of Saccharomyces cerevisiae: Spheroplast Method -- Electroporation Mediated DNA Transformation of Filamentous Fungi -- Chemical Transformation of Candida albicans -- Electroporation of Pichia pastoris -- Insertional Mutagenesis of the Flavinogenic Yeast Candida famata (Candida flareli) -- Biolistic Transformation for Delivering DNA

into the Mitochondria -- Biolistic Transformation of *Candida glabrata* for Homoplasmic Mitochondrial Genome Transformants -- Use of the Biolistic Particle Delivery System to Transform Fungal Genomes -- Transformation of Zygomycete *Mortierella alpina* Using Biolistic Particle Bombardment -- *Agrobacterium tumefaciens*-Mediated Transformation -- *Agrobacterium tumefaciens*-Mediated Transformation of Pucciniomycotina Red Yeasts -- Glass-bead and *Agrobacterium*-mediated Genetic Transformation of *Fusarium oxysporum* -- High Efficiency DNA Transformation of *Saccharomyces cerevisiae* with the LiAc/SS-DNA/PEG Method -- Transformation of Intact Cells of *Saccharomyces cerevisiae*: Lithium Methods and Possible Underlying Mechanism -- Transformation of Lithium Acetate-treated *Neurospora crassa* -- Application of Novel Polymeric Carrier of Plasmid DNA for Transformation of Yeast Cells -- Transformation of Fungi Using Shock Waves -- Pathways and Mechanisms of Yeast Competence: A New Frontier of Yeast Genetics -- Evaluation of Competence Phenomenon of Yeast *Saccharomyces cerevisiae* by Lipophilic Cations Accumulation and FT-IR Spectroscopy. Relation of Competence to Cell Cycle -- Recombination and Gene Targeting in *Neurospora* -- Efficient Generation of *Aspergillus niger* Knock Out strains by Combining NHEJ Mutants and a Split Marker Approach -- REMI in Molecular Fungal Biology -- TALEN-Based Genome Editing in Yeast.

Sommario/riassunto

Several different transformation techniques have been developed over the years and readily shown to be decisive methods in fungal biotechnology. This book will cover the basics behind the most commonly used transformation methods, as well as associated tools and techniques. Each chapter will provide protocols along with examples used in laboratories worldwide. Not only will this text provide a detailed background on applications in industrial and pharmaceutical relevant microbes, but also the importance of fungal pathogens in agricultural production (*Phytophthora* and *Botrytis*) and mammalian infection (*Penicillium marneffeii* and *Candida*). Genetic Transformation Systems in Fungi, Volume 1 provides in-depth coverage of how the transformation of DNA is used to understand the genetic basis behind these fungal traits.
