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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Anastomosis and Heterokaryon Formation -- Induction of the Sexual Cycle in Filamentous Ascomycetes -- What Have We Learned by Doing Transformations in Neurospora tetrasperma? -- Repeat-induced Point Mutation: A Fungal-specific, Endogenous Mutagenesis Process -- Calculating RIP Mutation in Fungal Genomes Using RIPCAL -- Fungal Transposable Elements -- In vivo Targeted Mutagenesis in Yeast using TaGTEAM -- RNA Silencing in Filamentous Fungi: from Basic to

Applications -- RNAi-mediated Gene Silencing in the Beta-lactam Producers Fungi Penicillium chrysogenum and Acremonium chrysogenum -- Controlling Fungal Gene Expression Using the Doxycycline-Dependent Tet-ON System in Aspergillus fumigates -- Expanding the Repertoire of Selectable Markers for Aspergillus Transformation -- Arginase (agaA) as a Fungal Transformation Marker -- Transformation of Ascomycetous Fungi using Autonomously Replicating Vectors -- A Recyclable and Bidirectionally Selectable Marker System for Transformation of Trichoderma -- Split Marker-Mediated Transformation and Targeted Gene Disruption in Filamentous Fungi -- Integrated Automation for Continuous High-Throughput Synthetic Chromosome Assembly and Transformation to Identify Improved Yeast Strains for Industrial Production of Biofuels and Bio-based Chemicals -- Imaging Flow Cytometry and High-throughput Microscopy for Automated Macroscopic Morphological Analysis of Filamentous Fungi -- Yeast Cell Electroporation in Droplet-Based Microfluidic Chip -- Identification of T-DNA Integration Sites: TAIL-PCR and Sequence Analysis -- Genetic and Genomic Manipulation in Aspergillus niger -- Genetic Manipulation of Meyerozyma guilliermondii.

Sommario/riassunto

Several different transformation techniques have been developed over the years and readily shown to be decisive methods in fungal biotechnology. While Volume 1 provided its readers with an in-depth understanding of how the transformation of DNA is used to understand the genetic basis behind these fungal traits, Volume 2 of this text describes the transformation associated methods, tools, and many relevant elements available to the modern fungal researcher. With ample illustrative examples and protocols, Genetic Transformation Systems in Fungi, Volume 2 is meant not only as a reference guide for the experienced researcher, but also as an a learning tool for the emerging scientist.