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Fungal biotechnology can be defined as the application of fungal organisms or their subcellular components along with associated process technology applied to manufacturing service industries and environmental management. Successful application of biotechnology processes associated with fungi is achieved through the combined integration of a number of scientific disciplines and technologies including genetics, molecular biology, biochemistry, and chemical and process engineering.

The industrial use of fungi is now at the forefront of biotechnology along with the use of other microbial and animal cells. Recent advances in the understanding of the molecular biology of fungi will further increase the growth of fungal technology in both fundamental and applied aspects. The major use of fungi continues to be associated with their ability to produce economically large amounts of a variety of small molecules and excreted enzymes.

The major purpose of the volume is to highlight important commercial aspects of fungi to the rapidly expanding biotechnology industry.

Written by 65 international authorities in the field, **Volume 4** of the **Handbook** examines topics often neglected by the biotechnology literature, including the potential use of mycorrhizal fungi; fungal polysaccharides; phytohormone production by fungi; the use of thermophilic fungi in agriculture; fungal degradation of industrial waste and wastewater; fungal degradation of lignin, and more.

The 34 chapters are divided into major categories of molecular technologies; commercial applications; fungal decomposition of biological and chemical wastes; and culture collections, aspects of legal protection for biotechnology inventions, and biosafety.

**Handbook of Applied Mycology, Volume 4: Fungal Biotechnology** serves as practical resource for mycologists, microbiologists, biotechnologists, bioengineers, bioprocess technologists, biochemists, botanists and agriculturalists, and graduate-level students in the disciplines.

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