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Human Pathogenic Fungi

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Molecular Biology and Pathogenic Mechanisms

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Fungi cause a spectrum of diseases in humans ranging from comparatively innocuous superficial skin diseases caused by dermatophytes to invasive life-threatening infections caused by species such as *Candida albicans*, or *Cryptococcus neoformans*. Due to the opportunistic nature of most invasive mycoses, fungal pathogenicity has proven difficult to define. However the application of new genomic and other molecular techniques in recent years has revolutionized the field revealing fascinating new insights into the mechanisms of fungal pathogenesis.

In this book a panel of high profile authors critically reviews the most important research to provide a timely overview. The extensive reference sections in each chapter positively encourage readers to pursue the subject in greater detail. The book is divided into two sections: The first six chapters review the transformative effect of applying state-of-the-art tools and innovative approaches to research, particularly in the area of comparative biology. The second section consists of eight chapters, each dedicated to the molecular and cellular biology of a major fungal pathogen of humans: Candida, Aspergillus, Cryptococcus, dermatophytes, Histoplasma, Blastomyces, Pneumocystis and Paracoccidoides. These chapters provide a timely snapshot of the current state of research.

This volume is an essential reference for students, researchers and clinicians with an interest in fungal pathogenesis.

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