

Fungal Cell Wall

Structure, Synthesis, and Assembly

Second Edition

Fungal Cell Wall: Structure, Synthesis, and Assembly, Second Edition is a compendium of information on the chemical structure, synthesis, and organization of the cell wall of fungi. Reviewing the past 20 years of research in the field, it discusses experimental evidence that demonstrates the role of the cell wall in the growth, development, morphogenesis, and evolution of fungi.

More than just a revision, this second edition offers a fresh perspective on what is currently known about the fungal cell wall. It covers recent developments, conflicting theories, and important aspects that are largely forgotten—including critical analysis of the prevalent idea that cell walls from all fungal species have the same basic structure, organization, and behavior as the most popular models of study.

Chapters are self-contained and can be read independently, allowing readers to delve into specific topics. The book begins by examining the chemical composition and structure of the fungal cell wall, an area almost closed to modern research. It then describes the structure and synthesis of the most important components of the cell wall and analyzes the mechanisms of cell wall expansion and growth. Throughout, the book identifies the basic concepts that have led to modern ideas about cell walls.

A critical review of fungal cell wall research, this book helps readers understand the role of fungi in nature—both positive and negative—from their symbiotic associations and biotechnological applications to their pathogenicity to plants, animals, and humans.

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