

1. Record Nr.	UNINA9910824275903321
Autore	Kavanagh Kevin
Titolo	Fungi : Biology and Applications
Pubbl/distr/stampa	Hoboken, : Wiley, 2011
ISBN	1-119-97695-2 1-283-24044-0 9786613240446 1-119-97696-0
Edizione	[2nd ed.]
Descrizione fisica	1 online resource (386 p.)
Disciplina	579.5
Soggetti	Biotechnology Fungi Fungi - Biotechnology Fungi -- Biotechnology Biological Science Disciplines Eukaryota Technology Technology, Industry, and Agriculture Natural Science Disciplines Mechanical Engineering Engineering & Applied Sciences Bioengineering
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di contenuto	Fungi; Contents; List of Contributors; 1 Introduction to Fungal Physiology; 1.1 Introduction; 1.2 Morphology of Yeasts and Fungi; 1.3 Ultrastructure and Function of Fungal Cells; 1.4 Fungal Nutrition and Cellular Biosyntheses; 1.5 Fungal Metabolism; 1.6 Fungal Growth and Reproduction; 1.7 Conclusions; Revision Questions; References; Further Reading; 2 Fungal Genetics; 2.1 Introduction; 2.2 Fungal Life Cycles; 2.3 Sexual Analysis: Regulation of Mating; 2.4 Unique Characteristics of Filamentous Fungi that are Advantageous for Genetic Analysis; 2.5

Genetics as a Tool; 2.6 Conclusion

Acknowledgement Revision Questions; References; Further Reading; 3

Fungal Genomics; 3.1 Introduction; 3.2 Genome Sequencing; 3.3

Bioinformatics Tools; 3.4 Comparative Genomics; 3.5 Genomics and the Fungal Tree of Life; 3.6 Online Fungal Genomic Resources; 3.7

Conclusion; Revision Questions; Further Reading; 4 Fungal Genetics: A Post-Genomic Perspective; 4.1 Introduction; 4.2 Genomics; 4.3

Transcriptomics and Proteomics; 4.4 Proteomics; 4.5 Systems Biology;

4.6 Conclusion; Revision Questions; References; Further Reading; 5

Fungal Fermentations Systems and Products; 5.1 Introduction

5.2 Fungal Fermentation Systems 5.3 Commercial Fungal Products; 5.4

Conclusion; Revision Questions; Reference; Further Reading; 6

Pharmaceutical and Chemical Commodities from Fungi; 6.1

Introduction to Pharmaceutical and Chemical Commodities; 6.2 Fungal

Metabolism; 6.3 Antibiotic Production; 6.4 Pharmacologically Active

Products; 6.5 Chemical Commodities; 6.6 Yeast Extracts; 6.7 Enriched

Yeast; 6.8 Conclusions; Revision Questions; References; Further

Reading; 7 Biotechnological Use of Fungal Enzymes; 7.1 Introduction to

Enzymes; 7.2 Enzymes in Industry; 7.3 Current Enzyme Applications

7.4 Future Direction of Industrial Enzymes 7.5 Specific Enzymes; 7.6

Enzyme Production Strategies; 7.7 Conclusions; Revision Questions;

References; Further Reading; 8 The Biotechnological Exploitation of

Heterologous Protein Production in Fungi; 8.1 Introduction; 8.2

Heterologous Protein Expression in Fungi; 8.3 Case Study: Hepatitis B

Vaccine: A Billion Dollar Heterologous Protein from Yeast; 8.4 Further

Biotechnological Applications of Expression Technology; 8.5

Conclusions; Revision Questions; Further Reading; 9 Fungal Proteomics;

9.1 Introduction; 9.2 Protein Isolation and Purification

9.3 Electrophoretic Techniques 9.4 Protein Mass Spectrometry; 9.5

Fungal Proteomics; 9.6 Specialized Proteomics Applications in Fungal

Research; 9.7 Conclusion; Revision Questions; Further Reading; 10

Fungal Infections of Humans; 10.1 Introduction; 10.2 Superficial

Mycoses; 10.3 Opportunistic Mycoses; 10.4 Endemic Systemic Mycoses;

10.5 Mycotoxicoses; 10.6 Concluding Remarks; Revision Questions;

Further Reading; 11 Antifungal Agents for Use in Human Therapy; 11.1

Introduction; 11.2 Drugs Targeting the Plasma Membrane; 11.3 Drugs

Targeting the Cell Wall

11.4 Drugs Targeting Nucleic Acid and Protein Synthesis

Sommario/riassunto

Fungi: Biology and Applications, Second Edition provides a comprehensive treatment of fungi, covering biochemistry, genetics and the medical and economic significance of these organisms at introductory level. With no prior knowledge of the subject assumed, the opening chapters offer a broad overview of the basics of fungal biology, in particular the physiology and genetics of fungi and also a new chapter on the application of genomics to fungi. Later chapters move on to include more detailed coverage of topics such as antibiotic and chemical commodities from fungi, new chapters on biote
