

1. Record Nr.	UNINA9910737300103321
Titolo	Yeasts in Biotechnology and Human Health : Physiological Genomic Approaches // edited by Isabel Sá-Correia
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2019
ISBN	3-030-13035-5
Edizione	[1st ed. 2019.]
Descrizione fisica	1 online resource (v, 242 pages)
Collana	Progress in Molecular and Subcellular Biology, , 0079-6484 ; ; 58
Disciplina	660.62
Soggetti	Microbiology Microbial genetics Microbial genomics Medical microbiology Biomedical engineering Eukaryotic Microbiology Microbial Genetics and Genomics Applied Microbiology Medical Microbiology Biomedical Engineering/Biotechnology
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Industrial Applications and Model Systems -- Physiological genomics of multistress resistance in the yeast cell model and factory: focus on MDR/MXR transporters -- Mechanisms of yeast adaptation to wine fermentations -- Development of robust yeast strains for lignocellulosic bio-refineries based on genome-wide studies -- Physiological genomics of the highly weak-acid-tolerant food spoilage yeasts of <i>Zygosaccharomyces bailii</i> sensu lato -- Yeast genome-scale metabolic models for simulating genotype-phenotype relations -- Human Health and Disease -- Emerging mechanisms of drug resistance in <i>Candida albicans</i> -- Genome-wide response to drugs and stress in the pathogenic yeast <i>Candida glabrata</i> -- Lipidomics approaches: applied to the study of pathogenesis in <i>Candida</i> species -- Yeast at the forefront of research on ageing and age-related diseases.

## Sommario/riassunto

This book discusses genome-based strategies to provide a holistic understanding of yeasts in Human Health and as model organisms in basic research or industrial production. Using numerous *Saccharomyces cerevisiae* strains and various non-conventional yeast species isolated from diverse origins, it describes essential biological processes, the biotechnological exploitation of yeast and pathogenesis control. It also demonstrates how functional and comparative genomics and the development of genome engineering tools are used in modern yeast research. The use of yeasts as experimental eukaryotic models increasingly gained prominence when several Nobel Prizes in Physiology/Medicine and Chemistry were awarded for innovative research, using yeast strains to elucidate molecular mechanisms in a wide range of human physiological processes and diseases, such as autophagy, cell cycle regulation and telomerase activity. This book offers useful insights for scientists in yeast research, clinical scientists working with yeast infectious models and for industrial researchers using applied microbiology.

---