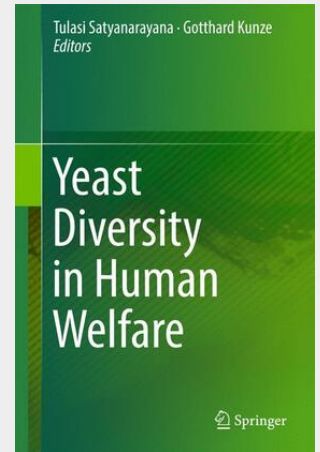


Yeast Diversity in Human Welfare

This book brings together and updates the latest information on the diversity of yeasts, their molecular features and their applications in the welfare of mankind. Yeasts are eukaryotic microfungi widely found in natural environments, including those with extreme conditions such as low temperatures, low oxygen levels and low water availability. To date, approximately 2,000 of the estimated 30,000 to 45,000 species of yeast on Earth, belonging to around 200 genera have been described. Although there are a few that are opportunistic human and animal pathogens, the vast majority of yeasts are beneficial, playing an important role in the food chain and in the carbon, nitrogen and sulphur cycles. In addition, yeasts such as *Saccharomyces cerevisiae*, *Hansenula polymorpha* and *Pichia pastoris* are used in expressing foreign genes to produce proteins of pharmaceutical interest. A landmark in biotechnology was reached in 1996 with the completion of sequencing of the entire *S.cerevisiae* genome, and it has now become a central player in the development of an entirely new approach to biological research and synthetic biology. The sequencing of genomes of several yeasts including *Schizosaccharomyces pombe*, *Candida albicans* and *Cryptococcus neoformans* has also recently been completed.

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160,49 €

149,99 € (zzgl. MwSt.)

Lieferfrist: bis zu 10 Tage

Artikelnummer: 9789811026201

Medium: Buch

ISBN: 978-981-10-2620-1

Verlag: Springer Nature Singapore

Erscheinungstermin: 19.05.2017

Sprache(n): Englisch

Auflage: 1. Auflage 2017

Produktform: Gebunden

Gewicht: 910 g

Seiten: 486

Format (B x H): 160 x 241 mm

