Preface

Invasive fungal infections are a significant cause of morbidity and mortality. Over the past decade there has been a concerted effort to develop reliable methods for the detection of such infections. Early diagnosis of IFI is critical, allowing timely administration of appropriate antifungal therapy. The increased use of antifungal drugs has led to a parallel emergence of resistant and less-susceptible strains. This emergence has increased the importance of prompt and accurate identification of the causative agents of fungal infections. Rapid diagnosis is perhaps the most critical factor in ensuring a positive patient outcome. In this respect it is our hope that this volume may provide ideas for those intending to introduce novel technologies for fungal detection into their laboratories.

Key factors in introducing any new technology into a diagnostic setting include ease of use and rapid turnaround time without compromising sensitivity and specificity. To this end, we have focused on including in this volume methods which offer these characteristics with the potential to be adapted in the routine diagnostic setting.

While focusing specifically on fungal detection in clinical settings, the methods described are applicable to all areas utilizing fungal diagnostics including, environmental testing, agriculture and food production, and veterinary diagnostics. In addition, some of the methods described represent a significant practical demonstration of state-of-the-art molecular methods which are suitable for detection of non-fungal microorganisms and infectious agents. Included in this volume also are comprehensive reviews of fungal infections, a review of commercially available systems, as well as chapters concerned with sample preparation and a broad range of interesting methods for detection.

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