

Preface

Knowledge of how the human immune system defends against infections caused by the medically important fungi continues to evolve as an increasing amount of data accumulate from both clinical studies and animal models. It has been 10 years since a volume of chapters dedicated to fungal immunology has been published. Thus, when the opportunity presented to edit a new volume in fungal immunology, we were both honored and excited about the prospects. However, in considering a layout and format, we strived for a unique angle by which to showcase the immense data accumulated over the past 10 years. Accordingly, rather than simply separate the book by organism with chapters on each type of response or separate the book by type of response with inclusion of chapters for each organism, we decided on a layout based on organ systems, recognizing that each medically important fungal organism often causes disease in distinct organ systems, together with the contemporary concept that innate and adaptive immune reactivity is not mutually exclusive, but highly linked and networked for optimal function. Thus, we feel we have succeeded in providing a unique format that did not sacrifice content. Furthermore, the organ-specific approach has the potential to better serve infectious disease physicians and researchers working in specific organ systems without loss of any information of interest to immunologists and medical mycologists.

The organs inclusive are: oral cavity, brain/CNS, lung, skin, vagina, and blood. Included in each organ section are chapters detailing the most contemporary host response mechanisms against the fungal pathogens most often affecting those organs, including local and regional host response mechanisms now recognized to be as critical as systemic immune mechanisms. Also included are chapters on fungal hypersensitivity, fungal sinusitis, and fungal-endothelial cell interactions. As immunity to fungi are often not mentioned in discussions of immunology and infectious diseases, this compilation will provide easy access to information that may stimulate the inclusion of fungi in future discussions.

It has become quite apparent in compiling the chapters for this book that despite each fungal organism having distinct properties, it is uncanny how similar the host responses are against each organism. Moreover, the host response patterns can be quite distinct to other types of organisms (i.e., bacteria, viruses, parasites). Thus, the book provides the medium to fully realize the unique yet highly uniform means by which the host responds to these diverse eukaryotic human pathogens—the fungi.

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