



Book Review

A. Casadevall and J.R. Perfect, *Cryptococcus neoformans*. ASM Press, Washington, DC, USA; 1998, 541 pp., US\$89.95

As we cross into the new millennium, with the threshold of near instantaneous access to information of all types via the internet, one has to ask, “why do we need a whole book devoted to an in-depth literature review of one microbe? After all, isn’t this information easily accessible from a Medline search via one of the excellent search engines?” The answer to these questions is two-part: depth and perspective.

Depth. Medline searches of a topic are incomplete: nothing prior to 1967 and no abstracts prior to the mid-early 1986’s. Thus, a comprehensive in-depth subject review provides a source of references that are not retrieved by literature searches. In their book, *Cryptococcus neoformans*, Arturo Casadevall and John Perfect provide such an in-depth review. There are numerous citations to pre-1967 studies and case reports, in addition to citations from foreign journals that most medical libraries do not carry. These citations provide depth to their comprehensive (Medline-searchable) literature review of *Cryptococcus* and cryptococcosis.

Perspective. Unfortunately, primary research literature no longer allows speculation or extensive synthesis in the discussion section of publications. However, books, chapters, and review articles remain the realm of academic creativity where authors are allowed to speculate and propose models/ideas that are distilled from the work of numerous investigators. To this end, Casadevall and Perfect have used this book as a venue for presenting the work of numerous investigators and then proposing conceptual frameworks to view these studies. Most of the frameworks are well-accepted by other *Cryptococcus* researchers. However, it should be noted that a student or other investigator outside the field would be hard-pressed to find these frameworks

written down someplace (outside of this book). Thus, this comprehensive treatise on the subject of *Cryptococcus* and cryptococcosis offers a written perspective on the field.

Authors. A written perspective on a field is incomplete without knowing about the authors who offered that perspective. Thus, a strength of this book is the authors. Both Arturo Casadevall and John Perfect are established and well-respected researchers in cryptococcal biology. Casadevall is best known for his work on antibody-mediated protection during *C. neoformans* infection but also has numerous publications on the pathogenesis of this fungus. Perfect is one of the pioneers in the field of cryptococcal molecular biology and continues to work on the biochemistry of cryptococcal virulence and growth.

Content. This book provides a comprehensive review of the field of *Cryptococcus* and cryptococcosis. There are 15 chapters (530 pp.) plus 23 color plates. The chapters include taxonomy, ecology, biochemistry, molecular biology, virulence factors, host defense (3), animal models, epidemiology, diagnosis/laboratory techniques, and human cryptococcosis (3). The amount of detailed information in this book is impressive, making this a good “reference manual” for the field of *Cryptococcus* and cryptococcosis.

In the 1950’s Littman and Zimmerman wrote a monograph on the current understanding of cryptococcal biology and disease. In their preface, Casadevall and Perfect state their objective for this book as an “attempt to chronicle the substantial progress in the understanding of this infection since their [Littman and Zimmerman] mid 20th century treatise”. Casadevall and Perfect have met and surpassed their objective with this book. As a *Cryptococcus* researcher, I strongly recommend this book as a reference for students and mycologists interested in the complex

biology and pathogenesis of the fungus *Cryptococcus neoformans*.

Gary B. Huffnagle, Ph.D.
Assistant Research Scientist
Pulmonary Division – Internal Medicine
University of Michigan School of Medicine
Ann Arbor, MI 48109-0642, USA