# Book Reviews

**New Approaches for Antifungal Drugs.** By Prabhavathi B. Fernandes (Ed.). Birkhauser, Boston, MA. 1992. x + 201 pp. 15.5 × 24 cm. ISBN 0-8176-3602-1. $74.50.

Antifungal therapy is in the midst of an explosion of new research, both basic and applied (pharmaceutical drug discovery), as the relevance and need for new antifungal human medicinals becomes more apparent with the worldwide growth of the immunocompromised patient population (cancer and AIDS patients). The ten topics presented by authors from academic and industrial backgrounds review and update most of the relevant research areas for antifungal drugs. From the chapter on azole antifungal agents, containing a refreshing basic science approach to the subject, including the opportunity for molecular biology to assist in the development of newer azoles as resistance becomes a clinical problem, to the chapter on the apparently fungi-unique elongation factor 3 target, this monograph is an excellent review and update for any individual or organization interested in antifungal research. The pharmaceutical-relevant current targets of (1–6)-β-glucan biosynthesis, phospholipid formulations of amphotericin B, and chitin synthesis are well-organized and -written, with a reasonably fair assessment of drug candidate status, although the Bussey et al. chapter on (1–6)-β-glucan biosynthesis is somewhat out-of-place in its "basic science" nature. Pradimicins are thoroughly reviewed, as is the topic of antifungal proteins from plant sources; however the potential clinical relevance of both may be overstated. The targeting of the *Candida* gene system as a model for "Genetic Approaches to Antifungal Drug Discovery" (Gorman chapter) is timely and relevant, with vision of the next generation antifungal research strategies capitalizing on the tools of molecular biology to better understand what opportunities exist waiting to be exploited. Lastly, the introductory chapter by Clark, setting the tone for the quality of this book, is one of the best overviews of antifungal drug research, therapy, and philosophy to appear in the literature. Most of the chapters in *New Approaches for Antifungal Drugs* are easy reading, timely, and with up-to-date references for all interested in antifungals, whether bench scientist (chemist or biologist), business or marketing types supporting antifungal sales, or clinicians.

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**Tandem Organic Reactions.** By Tse-Lok Ho. John Wiley & Sons, Inc., New York. 1992. x + 502 pp. 16 × 24 cm. ISBN 0-471-57022-2. $79.95.

With the objective of attaining the highest possible efficiency of synthetic operations, it is usually beneficial to combine two or more reactions into a single unit operation, i.e. to perform tandem reactions. Thus, in synthesis design by retrosynthetic analysis tactical combination of transforms is a useful procedure. Reactions that can be used together in a specific sequence may be grouped, and each of these multistep packages can be considered loosely as one transform. The importance of tandem reactions is obvious; they are of both pragmatic value and aesthetic appeal. In this book the author has provided a survey of these reactions. Tandem reactions are generally a planned sequence of well-known transformations. These are covered in 15 chapters which may be illustrated by the one on aldol condensation which contains subsections on Michael–aldol tandems, Claisen–aldol and multiple aldol condensations, retro-aldol–aldol tandems, Mannich–aldol tandems, and aldol-type reactions in tandem with other processes. Other chapters address tandem reactions such as those involving Michael reactions, vicinal difunctionalization of alkenes and alkynes, Dieckmann and Claisen condensations, Mannich reactions, Diels–Alder reactions, electrolytic reactions, sigmatropic rearrangements, and free radical reactions.

As tandem reactions are rarely indexed in the chemical literature, this book provides an unique compilation of synthetic information. It will be of interest to all synthetic chemists and most especially those involved in process development.

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