

defined (YCB/lysine broth) and complex (Sabouraud dextrose broth) media as previously described.^{9a,b} MIC and MFC values were also determined as previously described.⁹ Minimum fungicidal activity (MFC) was defined as the lowest concentration of drug from which subcultures were negative or which yielded fewer than three colonies.^{9b}

Systemic Infections with *Candida albicans* in Mice.^{9c} Typically, 6×10^6 yeast cells of *C. Albicans* 3153A were injected into a tail vein of mice (weight: 20–22 g) to generate a subacute systemic model. Untreated animals expired within 7 days. For the therapeutic test, 2 mg of 3 and 4 or 1 mg of amphotericin B was administered once intraperitoneally on day 2 (2 days after

the challenge). Efficacy was evaluated by the survival of mice on day 14.

Registry No. 3, 123290-45-9; 4, 123290-46-0; 5, 123307-60-8; 6, 123290-47-1; 7, 123290-48-2; 8, 123290-49-3; 9, 123290-50-6; 10, 123290-51-7; 11, 123290-52-8; 12, 123290-53-9; 13, 123290-54-0; 14, 123290-55-1; 15, 123356-30-9; 16, 123290-56-2; 17, 123290-57-3; 18, 123290-58-4; 19, 123290-59-5; 20, 123290-60-8; 21, 123307-97-1; 22, 123290-61-9; 23, 123290-62-0; 14,15-sterol reductase, 69403-07-2.

Supplementary Material Available: ¹H NMR, MS, and TLC data for compounds 13–22 and 3–7 (1 page). Ordering information is given on any current masthead page.

Additions and Corrections

1989, Volume 32

Whei-Mei Wu, Emil Pop, Efraim Shek, and Nicholas Bodor*: Brain-Specific Chemical Delivery Systems for β -Lactam Antibiotics. In Vitro and in Vivo Studies of Some Dihydropyridine and Dihydroisoquinoline Derivatives of Benzylpenicillin in Rats.

Pages 1785–1786. During the printing process, Figures 2 and 3 were reversed (the captions are correct). In both figure captions the last symbol should be changed from ∇ to \circ .

Book Reviews

The Muscarinic Receptors. Edited by Joan Heller Brown. Humana Press, Clifton, NJ. 1989. xviii + 478 pp. 15 \times 23 cm. ISBN 0-89603-156-X. \$89.50.

This is the sixth book in *The Receptors* series. Research on muscarinic receptors has been particularly intense during the past decade. It is now accepted that a family of these receptors exist. Advances of the understanding in this very important class of receptors are presented in 12 chapters written by experts in the field. These chapters present a wealth of information on a wide variety of topics including the history and fundamental properties of the muscarinic cholinergic receptors, their binding and pharmacological properties, purification, subpopulations, cloning, structural determinants of muscarinic agonist activity, regulation of cyclic AMP and phospholipid metabolism, calcium mobilization, allosteric interactions, regulation of cyclic GMP, eicosanoid production, ion channels, and the number and function of this class of receptors. The book concludes with an excellent discussion of future research anticipated for the muscarinic receptors.

Each chapter is followed by an excellent up-to-date list of references. An author index is also included. *The Muscarinic Receptors*, in keeping with other volumes in the series, is essential reading for those concerned with this class of receptors. Medicinal chemists will find chapter 5, Structural Determinants of Muscarinic Agonist Activity, to be a comprehensive review of particular interest.

Staff

Organic Functional Group Preparations. Volume III. Second Edition. By Stanley R. Sandler and Wolf Karo. Academic Press, San Diego, CA. 1989. xiv + 512 pp. 16 \times 23.5 cm. ISBN 0-12-618603. \$99.00.

The purpose of this series is to provide organic chemists with an up-to-date and convenient source of useful preparative procedures. For this second edition the literature for 13 functional

groups has been reviewed from 1971 to the present. It includes new information where pertinent, new and expanded tables of data, and additional preparations. References are derived from journal as well as United States and foreign patent literature.

Topics included in the present volume are acetals and ketals, anhydrides, monoalkyl sulfates, and sulfenic acids and sulfenic acid derivatives, isonitriles (isocyanides), amidines, imides, imidates, nitrones, hydroxylamines and substituted hydroxylamines, oximes, hydroxamic acids, and thiohydroxamic acids. Where possible, the preparative details for each functional group are divided according to their reaction type, i.e., condensation, elimination, oxidation, and reduction.

This volume of *Organic Chemistry, A Series of Monographs, Volume 12-III* is of general organic synthetic importance. It will be a valuable addition to the libraries of medicinal chemists with focus on any of the 13 functional group preparations that are reviewed.

Staff

Molecular Structure and Energetics. Volume 9. Mechanistic Principles of Enzyme Activity. Volume 10. Environmental Influences and Recognition in Enzyme Chemistry. Edited by Joel C. Liebman and Arthur Greenberg. VCH Publishers, Inc., New York, NY and VCH Verlagsgesellschaft mbH, Weinheim, Federal Republic of Germany. 1988. Vol. 9: xii + 404 pp. 16 \times 24 cm. ISBN 0-89573-706-x. \$89.00. Vol. 10: xv + 349 pp. 16 \times 24 cm. ISBN 0-89573-707-8. \$89.00.

These two volumes continue the title series with a focus on the influence of structure and energetics upon activities and properties of selected enzyme systems. The first of these books is intended to deal primarily with mechanistic principles, including experimental methods that have been employed in their study, and the second with structural and environmental influences on enzyme catalysis, including emphasis on theoretical considerations. The segregation of the included topics into two classifications,