

Book Reviews

Recent Advances in the Chemistry of Anti-infective Agents. Edited by P. H. Bentley and R. Ponsford. The Royal Society of Chemistry, Cambridge, England. 1992. vii + 360 pp. 16 × 23.5 cm. ISBN 0-85186-245-4. £55.00.

This volume is based on the proceedings of the First International Symposium on Recent Advances in the Chemistry of Anti-infective Agents held July 5-8, 1992, at Cambridge University. The meeting follows a series of symposia held at the same site in 1976, 1980, 1984, and 1988 devoted to β -lactam antibiotics, but since developments in this field have slowed in recent years, the symposium was expanded to include other anti-infective agents. The book is divided into three sections: (1) Chemistry of Antibacterials/Antibiotics, (2) Chemistry of Antifungals, and (3) Chemistry of Antivirals and Antiparasitics. The first section contains chapters on β -lactams, erythromycins, quinolones, pseudomonic acids, calyculin A, and the use of iron transport as a mechanism for drug delivery. Section 2 has chapters that cover the clinical need for improved antifungal agents, new compounds in development (particularly azoles related to miconazole), amphotericin B derivatives, inhibitors of lanosterol biosynthesis, and papulacandins. The last section focuses mainly on anti-HIV agents (modified nucleosides, diazepamone inhibitors of reverse transcriptase and Tat, inhibitors of HIV protease). There are also chapters on quinones active against malaria and AIDS-associated opportunistic infections as well as crystallographic studies on influenza virus neuraminidase.

The chapters are generally well-written and usually contain a mechanism-based rationale for the design of new anti-infective agents. However, most of the chapters do not present a comprehensive overview of the topic covered but are usually a summary of the author's research in a specific area. The references at the end of each chapter are quite current, including 1991 and 1992 citations, and there is a short subject index. Although this book will be of interest to most medicinal chemists involved in anti-infective research, the price is really too high to consider buying a personal copy. The price seems particularly out of line when one considers that the volume is not typeset but is printed directly from copy supplied by the authors.

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Insulin: Molecular Biology to Pathology. Frances M. Ashcroft and Stephen J. H. Ashcroft. Oxford University Press, New York. 1992. xxiii + 421 pp. 18.5 × 24 cm. ISBN 0-19-963228-6. \$55.00 (paperback).

This book provides a broad overview of insulin and diabetes. The chapters progress from the pancreatic β cell and the process of insulin gene expression and secretion, to the insulin receptor and insulin action, and ultimately the pathogenesis of both insulin-dependent diabetes mellitus (IDDM) and non-insulin-dependent

diabetes mellitus (NIDDM). Overall, the book is somewhat successful in providing a comprehensive analysis of the topics; however, due to the rapidly changing nature of the field and the availability of new observations, many of the discussions do not include the most recent advances. Nevertheless, the book provides a well-organized summary of insulin expression and function and can serve as a beginning reference text for individuals not familiar with diabetes.

The first three sections deal with the β cell and insulin. The morphology of the islet and β cell is summarized and provides an appreciation of the unique site of insulin synthesis. Next, molecular mechanisms involved with insulin gene expression are covered although many of these mechanisms are still unclear. For a book intended for a general audience, this provides more detail than one usually wants to know. Insulin biosynthesis is described and general descriptions of translational regulation and the normal secretory pathway are provided. The last part deals with the signals within the β cell that trigger insulin secretion, including metabolism and electrophysiology of the β cell.

The next section deals with physiology and insulin action describing insulin effects on carbohydrate, protein, and lipid metabolism. This is followed by a discussion of the insulin receptor which includes the structure of the receptor, itinerary of the receptor in the cell, and a brief description of mutants of the insulin receptor. Another chapter then addresses intracellular pathways that are regulated by insulin, discussing some aspects of enzyme regulation and the signalling pathways that may be involved.

In the final sections of the book, clinical aspects of diabetes are presented and the possible pathogenetic mechanisms for IDDM and NIDDM discussed. This includes autoimmunity and genetics. Although a detailed description is provided, many recent observations are not included and this limits the usefulness of this portion of the book.

This book can serve as a reasonable starting point for learning about insulin and diabetes to one not familiar with the field as it covers a broad array of topics. However, it must be appreciated that advances in our understanding of insulin expression and diabetes are continuing.

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Excitatory Amino Acid Receptors. Design of Agonists and Antagonists. Edited by P. Krogsgaard-Larsen and J. J. Hansen. Ellis Horwood Ltd., London, England. 1992. 382 pp. 17.5 × 24 cm. ISBN 13-296716-2. \$135.00.

Research on excitatory amino acid (EAA)-mediated neurotransmission has developed into one of the fastest-growing fields in both basic neuroscience and pharmaceutical research. This work shows great promise to

provide both substantial insight into the workings of the nervous system and novel therapies for a variety of neurological pathologies. This volume provides a timely survey of the state of the art regarding ligand design in this area. As its title implies, the book has been assembled with the medicinal chemist's point of view as the central focus. It should therefore prove particularly useful to the readers of this journal.

Chapters 1, 5, and 16 discuss the roles of EAA receptors in neurological disorders. Following a discussion in chapter 2 of EAA receptor subtypes, chapters 8-14 discuss the design, synthesis, and evaluation of selective ligands for these domains. Chapter 6 is a particularly interesting contribution; it combines medicinal chemistry, pharmacology, and molecular modeling into a cogent discussion of the possibilities for the existence of subtypes of NMDA receptor. The confluence of disciplines makes this chapter a fine example of the multidisciplinary approach being brought to bear in modern pharmaceutical research.

The book is in general extremely well illustrated and contains a color section of the molecular graphics which are central to several of the discussions. The chapters are well-referenced, with a large number of citations from 1990-91. There are a few instances of unfortunate terminology; the well-known anomaly in the use of *cis/trans* nomenclature arises in chapter 6, and elsewhere the stereochemical descriptors D- and L- are intermingled with R- and S-, even in the same paragraph. The one area of EAA research which is conspicuous in its absence is the understanding of the molecular biology of these receptors. Given the extraordinary advances that have been made in this area during the past 2 years, and which continue unabated, they will no doubt be the subject of their own volume in the near future.

This book is an indispensable resource for medicinal chemists working in the EAA area. It is unfortunate that its hefty price tag will prevent inclusion in most personal libraries; it should certainly be in the library of any institution where research in this field is being performed.

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Peptides 1992. Proceedings of the Twenty-Second European Peptide Symposium. Edited by C. H. Schneider and A. N. Eberle. ESCOM Science Publishers B.V., Leiden, The Netherlands, 1993. lviii + 998 pp. 17 × 24.5 cm. ISBN 90-72199-16-2. \$224.00.

In these proceedings are presented the text of Professor Viktor Mutt's Joseph Rudinger Memorial Lecture "On the necessity of isolating peptides", delivered in conjunction with his receipt of this most prestigious award, plus the abstracts of 437 lectures and posters from nearly 800 authors. The book is divided into 14 sections. In the first seven sections, abstracts of the lectures are grouped into synthetic aspects, large-scale synthesis, rapid preparations/libraries, conformational/physicochemical aspects, biological aspects, immunological aspects, and miscellaneous aspects. The final seven sections are comprised of abstracts of the poster presentations grouped in a similar

way, namely, peptide synthesis and chemistry, peptide conformation/*de novo* design, peptide mimetics, biologically active peptides, peptides in immunology, and miscellaneous. The book is beautifully printed with excellent author and subject indexes.

This timely collection of abstracts of current peptide research presents a superb view of recent developments in this most important area. Viktor Mutt's lecture is an outstanding historical account of the isolation of peptides from natural sources that is recommended reading for medicinal chemists. The abstracts provide reference to the many avenues of ongoing peptide research. Library access is recommended.

Staff

Protein Biotechnology. Isolation, Characterization, and Stabilization. Edited by Felix Franks. Humana Press, Inc., Totowa, NJ. 1993. xi + 592 pp. 15.5 × 23 cm. ISBN 0-89603-230-2. \$89.50.

With the emergence of biotechnology, the production of proteins as therapeutics has accelerated in pace and importance. Indeed, several life-saving protein drugs have been approved and numerous others are pending or in preparation for clinical trial.

However, with the boom in demand has come an increased need for the understanding of the behavior of proteins in large-scale processes designed to produce therapeutic-grade material. For the uninitiated, the challenges of managing fermentation and upstream and downstream processing while all the while attempting to be sensitive to cost can be overwhelming. For the "start up" biotech company and even the sophisticated organization the learning curve associated with product scale up is all too familiar.

In some cases companies producing effective, although costly, drugs have come under intense criticism and even congressional review. As both administrative and regulatory government agencies focus on health-care costs, production efficiencies will become even more important.

Felix Franks and his distinguished colleagues have attempted to assemble in a single volume an outline of the characteristics of proteins and the problems associated with their purification and development as drugs. The authors begin with a description of the basic nature of proteins and the amino acids that compose them and proceed through the various stages and descriptions of some of the more common purification schemes and strategies. The text is easily readable and covers the "state of the art" while introducing the novice to the consideration of costs and their calculation and consideration in process design.

It is these chapters that are perhaps the most useful, as while this information is available in the chemical engineering literature, considerations of this sort are often lacking in basic biochemistry texts.

Those developing laboratory bench procedures in anticipation of a protein being useful in the clinic are well advised to familiarize themselves with the principles given.

The authors with their extensive background in the field are well qualified for the task and I readily recommend their book.

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Schizophrenia: Empirical Research and Findings. By Eckart R. Straube and Robert D. Oades. Academic Press, Incorporated. San Diego, CA. 1992. xiii + 637 pp. 15.5 × 23 cm. ISBN 0-12-673010-5

Schizophrenia is the 19th in a series of monographs, texts, and treatises edited by D. T. Lykken and P. C. Kendall each of which attempts to comprehensively review areas of clinical importance. As with its predecessors, the volume is intended to serve primarily as a textbook and for this reason remains of importance, notwithstanding the 1992 issue date.

Schizophrenia is richly documented, being based on the review of well over 2000 publications, many of which are cited by the authors (I counted over 850 in the first seven chapters alone). Importantly, each of the first 14 (of 17) chapters has been written to "stand alone" with the specific intent that readers could proceed immediately to material of particular interest. For those whose time is of exceptional value, chapters end with a brief synopsis highlighting content. It is not until chapter 16 (aptly titled "An Integrative View of Chapters 1 through 14") that the summaries and interpretations from prior sections provide a basis for discussion, and only in chapter 17 (Synopsis) do the authors overlay their own opinions on subject matter.

By way of specifics, *Schizophrenia* is divided into seven sections. Part 1 (one chapter) begins with a general overview and description of the clinical findings associated with the disease. Part 2 (Cognitive Symptoms) includes chapters detailing the thought, speech, memory, and perceptive alterations seen in patients. Part 3 (Psychophysiological symptoms) contains two chapters on autonomic and central nervous system responses to external stimuli. Section 4 (Neuropsychological Symptoms) devotes three chapters to the discussion of testing procedures useful in diagnosis, the anatomical basis of schizophrenia, and the potential contribution of asymmetric hemispheric function to the disease. Part 5 (three chapters) contains the obligatory examination of genetics versus environment; Section 6 (two chapters) discusses pharmacotherapy and outcome. The final segment of *Schizophrenia* (chapters 15-17) reviews and integrates the previous chapters with respect to theory, experimentation, and outcome.

Although those who are "expert" in the field could likely find some fault with *Schizophrenia*, as a nonclinical, basic scientist with a long-standing interest in the field, I found the book to be a superbly presented, detailed compendium of the current state of applied and theoretical knowledge. I think this would hold true for other nonmedical scientists, psychologists, medical and graduate students, as well as general-practice physicians or those whose expertise lies in other medical specialties. Additionally, *Schizophrenia* should not be overlooked by the practicing psychiatrist. As noted by the authors in their opening comments "one

of the reasons we put pen to paper...was that as the component disciplines in schizophrenia research follow ever more divergent paths, it has become increasingly difficult...to know about new developments in neighboring areas of research". For these reasons, I recommend *Schizophrenia* to all parties with an interest in the subject.

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Fundamentals of Magnetic Resonance. By Jacek W. Hennel and Jacek Klinowski. Longman Scientific & Technical Longman Group UK Limited Longman House, Burnt Mill, Harlow, Essex, CM20 2JE England. 1993. xi + 288 pp. 15 × 23 cm. ISBN 0-470-220449. \$49.95.

The objective of this text is to clearly and simply explain the physical and mathematical basis of nuclear magnetic resonance spectroscopy. To accomplish this goal, the authors divided the text into nine chapters followed by five appendices with 54 references. Chapter 1 begins with a general review of quantum mechanics. This chapter is a very complete review of the quantum mechanics necessary to understand the theory of NMR presented in the following chapters. For the chemist that is not routinely using quantum mechanics, this chapter requires careful study. The mathematics presented in chapter 1 are supplemented by five excellent appendices covering the topics of complex numbers, scalar and vector products, calculation of traces, Dirac functions, and sinusoidal operators.

Chapters 5 and 6 cover, from a mathematical perspective, continuous-wave and pulsed NMR. NMR in liquids is discussed in detail in Chapter 7. In this chapter an excellent discussion of correlated spectroscopy is presented. This section contains a very clear and detailed discussion of the COSY experiment using operators to explain the evolution of magnetization to yield the observed spectrum. In this mathematical discussion, the effects of chemical shift and coupling on the observed signals, i.e. diagonal and cross peaks, are described. The four types of peak shapes obtained from two-dimensional NMR experiments are also discussed in this section. The chapter ends with a discussion of inhomogeneity and relaxation as they relate to the creation of a spin echo.

The last chapter is a discussion of nuclear magnetic relaxation including detailed discussions of the mathematics of the Overhauser effect and calculation of T_1 and T_2 relaxation times, as well as a discussion of how correlation times relate to relaxation.

The text bridges the gap between the introductory text that presents NMR from a completely pictorial perspective and the purely quantum mechanical discussion. The practicing organic or medicinal chemist who is not accustomed to the math used in the text will be aided in their understanding of the mathematics by the material presented in the appendices. This reviewer rates the book as a very good primary or reference text for a graduate course in the mathematical and physical basis of NMR. The book is also a good reference text for the experienced

chemist. Any chemist interested in developing a deeper understanding of NMR will benefit from this text.

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Annual Reports in Medicinal Chemistry. Volume 28. Editor-in-Chief, James A. Bristol. Academic Press, Inc., San Diego, CA. 1993. xii + 388 pp. 17 × 25 cm. ISBN 0-12-040528-8. \$65.00.

The 1993 edition of this series continues in the well-known format of its predecessors. Timely and comprehensive updates of the most important areas of medicinal chemistry are presented in 10 pages or less including references. Introductions to and surveys of emerging fields of biological science that are anticipated to be of particular significance in the future are treated in a similar manner.

The present volume is divided into seven sections which incorporate a total of 35 chapters. The section headings are (I) CNS Agents, (II) Cardiovascular and Pulmonary Agents, (III) Chemotherapeutic Agents, (IV) Immunology, Endocrinology and Metabolic Diseases, (V) Topics in Biology, (VI) Topics in Drug Design and Discovery, and (VII) Trends and Perspectives. Sections I-IV are related to specific classes of medicinal agents and include chapters that update drug research on antipsychotics, antihypertensives, anti-infectives, and antiviral agents. Other chapters in these sections focus on prominent biological mechanisms, e.g. σ -binding sites, benzodiazepine receptors, G-protein-coupled CNS receptors, amyloid in Alzheimer's disease, non-peptide ligands for neuropeptide receptors, glycoprotein IIb/IIIa antagonists, tachykinins, antibacterial resistance mechanisms, growth hormone secretagogues, and immunophilins. Sections V and VI survey important topics in medicinal chemistry, biology, and drug design and their interfaces. In Section V are included chapters that review RGD-containing proteins, monoclonal antibody cancer therapies, diagnostics for Alzheimer's disease, glycoconjugate vaccines, and human gene therapy. Section VI consists of five chapters that update 3D database searching, peptide stability in drug development, adenosine receptors, taxol, and molecular diversity. The final section (VII) consists of the well-known "To Market-To-Market" chapter that presents all new chemical entities (a total of 36) introduced into the world marketplace in 1992 and one chapter, "Medicinal Chemistry: Through a Glass Darkly", that poses a fascinating perspective on the future of medicinal chemistry. The volume concludes with a comprehensive compound name, code number, and subject index for the present issue plus cumulative chapter titles and NCE introduction indexes.

Annual Reports in Medicinal Chemistry, which is sponsored by the Division of Medicinal Chemistry of the American Chemical Society, has become a rite of summer eagerly anticipated by the medicinal chemistry community. The present volume continues the superb tradition of its predecessors. All medicinal chemists require their own copy of this compilation. Researchers in other scientific disciplines concerned with research and development of

new drug products will likewise find this volume a most valuable source of information.

Staff

Inhibitors of Monoamine Oxidase B. Pharmacology and Clinical Use in Neurodegenerative Disorders. Edited by I. Szelenyi. Birkhauser Verlag, Basel. 1993. xviii + 360 pp. 17 × 23.5 cm. ISBN 0-8176-2782-0. \$119.50.

Although the title is more general, the 18 chapters and two appendices in this book focus mostly on deprenyl, the MAO-B (monoamine oxidase type B) inhibitor for which there is by far the most clinical data available. Deprenyl is a mechanism-based irreversible inhibitor of MAO-B of the type sometimes called "suicide inhibitors" or "suicide substrates." The approved International Nonproprietary Name for deprenyl is now selegiline, but because deprenyl has been used extensively in the scientific literature for decades, it is the name most frequently used in this book. Parnham's chapter is an interesting history of deprenyl and might be a good place to begin. The book summarizes and reviews most of what is known about deprenyl, from its biochemical properties to its pharmacologic effects in animals, its pharmacokinetics and metabolism to its therapeutic effects principally in Parkinson's disease. Not unexpectedly, there is overlap among some of the chapters. Several chapters mention, and the first appendix provides a useful compilation of, various other reversible and irreversible inhibitors selective for MAO-B.

(*R*)-Deprenyl is *N*-propynyl(-)-methamphetamine, and its metabolism includes removal of one or both alkyl groups so that both (*R*)-amphetamine and (*R*)-methamphetamine are among its metabolites. These enantiomers of the amphetamines are less stimulant than the *S* enantiomers. The extent to which these metabolites contribute to pharmacologic actions of deprenyl continues to be debated and is discussed in several chapters of this book. Animal studies and clinical experience suggest that deprenyl has little or no abuse potential.

The first section (two chapters and part of a third) is not about MAO-B inhibitors per se but gives background on Parkinson's disease, the disease for which deprenyl is used therapeutically. Other potential therapeutic uses of MAO-B inhibitors are discussed in the book, including tardive dyskinesia, traumatic brain injury, mental depression, and Alzheimer's disease. The chapter on antidepressant efficacy of MAO-B inhibitors mentions that deprenyl has antidepressant efficacy only at high doses at which its selectivity is lost, i.e., at which MAO-A is also inhibited, consistent with most evidence that MAO-A inhibition is more likely to have therapeutic value in mental depression than is MAO-B inhibition. Another chapter on Alzheimer's disease and deprenyl mentions encouraging but inconclusive clinical evidence for therapeutic benefit.

The book refers to previous reports of increased longevity in Parkinson's disease patients treated over the long term with deprenyl in combination with L-dopa. The purpose of those studies was to potentiate the therapeutic effects of L-dopa so that lower doses of L-dopa could be used, and the increased longevity might be due to decreased exposure to L-dopa rather than directly to the presence of deprenyl,

given that dopamine has been implicated in the mechanism of neurotoxicity of some drugs. The Elizan chapter has a balanced discussion of deprenyl use in combination with L-dopa in Parkinson's disease.

One significant advantage of deprenyl over earlier MAO inhibitors is its lack of potentiation of tyramine's pressor response. Tyramine is present in some foods, especially foods that have been fermented, and can cause profound and potentially fatal increases in blood pressure if its usual destruction in the gastrointestinal tract is blocked. Tyramine can be destroyed either by MAO-A or by MAO-B. Selective inhibition of either MAO-A or MAO-B leaves one form of MAO available to detoxify tyramine. Deprenyl actually blocks tyramine effects directly (a property not shared by all MAO-B inhibitors), probably because deprenyl inhibits the uptake carrier on norepinephrine neurons. Therefore, the reason deprenyl does not potentiate tyramine is due to more than simply lack of MAO-A inhibition.

Knoll's chapter discusses certain findings with deprenyl that no doubt contribute to the persisting interest in this drug, namely its ability to slow the age-related decline in sexual function in male rats and in learning capacity in rats and to increase longevity in rats. This chapter is the most optimistic one with respect to therapeutic potential of deprenyl.

All of the chapters are well referenced with abundant tables, figures, and diagrams, and this book will be useful to those interested in MAO, particularly in inhibitors of MAO-B. The more casual readers may be discouraged from adding the book to their personal library due to its cost.

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Books of Interest

An Introduction to Free Radicals. By John E. Leffler. John Wiley & Sons, Inc., New York. 1993. 287 pp. 16 × 24 cm. ISBN 0-471-59406-7. \$64.95.

High Performance Liquid Chromatography in Neuroscience Research. Volume 15. Edited by R. Bruce Holman, Alan J. Cross, and Michael H. Joseph. John Wiley & Sons, Inc., New York. 1993. xvii + 369 pp. 18.5 × 24 cm. ISBN 0-471-93813-0. \$79.95.

Gene Transportation. A Practical Approach. Edited by B. D. Hames and S. J. Higgins. Oxford University Press, New York. 1993. xx + 364 pp. 15.5 × 23 cm. ISBN 0-19-963291-X. \$42.00 (Pbk).

Antisense Research and Applications. Edited by Stanley T. Crooke and Bernard Lebleu. CRC Press, Inc., Boca Raton, FL. 1993. 579 pp. 18 × 26 cm. ISBN 0-8493-4705-X. \$199.95.

Fundamentals of Receptor, Enzyme, and Transport Kinetics. By John C. Matthews. CRC Press, Inc., Boca Raton, FL. 1993. 167 pp. 16 × 24 cm. ISBN 0-8493-4426-3. \$39.95.

Integration of Pharmacokinetics, Pharmacodynamics and Toxicokinetics in Rational Drug Develop-

ment. Edited by Avraham Yacobi, Jerome P. Skelly, Vinod P. Shah, and Leslie Z. Benet. Plenum Publishing Corporation, New York. 1993. xvi + 270 pp. 16.5 × 25.5 cm. ISBN 0-306-44356-2. \$79.00.

Advances in Second Messenger and Phosphoprotein Research. Volume 28. Cell Signalling Biology and Medicine of Signal Transduction. Edited by Barry L. Brown and Pauline R. M. Dobson. Raven Press, New York. 1993. xxiv + 293 pp. 16 × 23.5 cm. ISBN 0-7817-0076-0. \$89.00.

Cytotoxic Cells. Recognition, Effector Function, Generation, and Methods. Edited by M. V. Sitovsky and P. A. Henkart. Birkhauser Boston, Cambridge, MA. 1993. xiv + 527 pp. 18 × 25 cm. ISBN 0-8176-3608-0. \$99.00.

Organic Syntheses. Volume 71. Edited by Larry Overman. John Wiley & Sons, Inc., New York. 1993. xxxii + 285 pp. 15.5 × 23 cm. ISBN 0-471-30531-6. \$39.95.

Molecular Biology and Biotechnology. 3rd Edition. Edited by J. M. Walker and E. B. Gingold. Royal Society of Chemistry, Cambridge, U.K. 1993. xviii + 428 pp. 15.5 × 23 cm. ISBN 0-85186-794-4. £39.00.

Neuromethods 25. Neurotrophic Factors. Edited by Alan A. Boulton, Glen B. Baker, and Franz Hefti. The Humana Press, Inc., Totowa, NJ. 1993. xviii + 422 pp. 15.5 × 23 cm. ISBN 0-89603-249-3. \$89.50.

Imidazopyridines in Anxiety Disorders: A Novel Experiment and Therapeutic Approach. (LERS Monograph Series. Volume 8). Edited by G. Bartholini, M. Garreau, P. L. Morselli, and B. Zivkovic. Raven Press, New York. 1993. xv + 256 pp. 15.5 × 24 cm. ISBN 0-7817-0087-6. \$79.00.

The Blood-Brain Barrier Cellular and Molecular Biology. Edited by William M. Pardridge. Raven Press, Inc., New York. 1993. xix + 476 pp. 18.5 × 25.5 cm. ISBN 0-7817-0015-9. \$85.00.

Progress in Heterocyclic Chemistry. Volume 5. Edited by H. Suschitzky and E. F. V. Scriven. Pergamon Press Limited, Oxford, England. 1993. viii + 341 pp. 15 × 23 cm. ISBN 0-08-042074-5. £80.00.

Leaving No Stone Unturned. Pathways in Organometallic Chemistry. Profiles, Pathways, and Dreams. Series Editor Jeffrey I. Seeman. By F. Gordon A. Stone. American Chemical Society, Washington, D.C. 1993. xxiii + 240 pp. 15.5 × 23 cm. ISBN 0-8412-1826-9. \$24.95.

Calcium Antagonists. Pharmacology and Clinical Research. Edited by T. Godfraind, S. Govoni, R. Paoletti, and P. M. Vanhoutte. Kluwer Academic Publishers Group, The Netherlands. 1993. xxv + 380 pp. 16.5 × 24.5 cm. ISBN 0-7923-2259-2. \$132.00.

Second Supplements to the 2nd Edition of Rodd's Chemistry of Carbon Compounds. Volume 1: Aliphatic Compounds. Part D: Dihydric Alcohols: Their Oxidation Products and Derivatives. Edited

by M. Sainbury. Elsevier Science Publishers, The Netherlands. 1993. xvi + 367 pp. 15 × 22.5 cm. ISBN 0-444-81517-1. \$220.00.

Cyclitols and Their Derivatives. A Handbook of Physical, Spectral, and Synthetic Data. By Tomas Hudlicky and Mary Cebulak. VCH Publishers, Inc., New

York. 1993. vii + 315 pp. 16 × 24 cm. ISBN 1-56081-633-3. \$85.00.

β -Glucosidases: Biochemistry and Molecular Biology. ACS Symposium Series 533. Edited by Asim Esen. American Chemical Society, Washington, D.C. 1993. x + 259 pp. 15.5 × 23 cm. ISBN 0-8412-2697-0. \$74.95.