This material (203 mg, 0.68 mmol) was coupled to Z-Sta-OH (210 mg, 0.68 mmol) by general procedure B and chromatographed on silica gel (60 g), eluting initially with solvent system A and in a second run with solvent system D to provide the protected peptide in 47% yield: TLC, single spot, R_f(E) 0.68. Amino acid analysis: $Sta_{0.98}$, $Al_{1.00}$, $Sta^P_{0.90}$.

2-[Hydroxy[1(*R*)-[*N*-[(benzyloxycarbonyl)-L-phenylalanyl-L-histidyl-(3*S*,4*S*)-statyl-L-alanyl]amino]-3-methylbutyl]phosphinyl]acetic Acid Methyl Ester (26). Compound **48** (185 mg, 0.31 mmol) was decarbobenzoxylated according to general procedure C to give the amine in 100% yield. This material (143 mg, 0.31 mmol) was coupled to Z-Phe-His-OH[41] (137 mg, 0.31 mmol) according to general procedure B. Chromatography on silica gel (75 g) with solvent system D gave homogeneous material, which was lyophilized from *tert*-butyl alcohol, in 45% yield: TLC, single spot, R_f(D) 0.26.

2(*R*,*S*)-[[Hydroxy[1(*R*)-[*N*-[(benzyloxycarbonyl)-(3*S*,4*S*)-statyl]amino]-3-methylbutyl]phosphinyl]-methyl]-3-methylbutanoic Acid Methyl Ester (49). Compound **7a** (413 mg, 1.0 mmol) was decarbobenzoxylated according to general procedure C in 97% yield. This material (270 mg, 0.97 mmol) was coupled to Z-Sta-OH (299.7 mg, 0.97 mmol) according to general procedure B. Chromatography on silica gel (100 g), eluting with solvent system B, gave the product in 70% yield: TLC, single spot, R_f(E) 0.54, R_f(F) 0.21.

2(*R*,*S*)-[[Hydroxy[1(*R*)-[*N*-[(benzyloxycarbonyl)-L-phenylalanyl-L-histidyl-(3*S*,4*S*)-statyl]amino]-3-methylbutyl]phosphinyl]methyl]-3-methylbutanoic Acid Methyl Ester (27). Compound **49** (216 mg, 0.38 mmol) was decarbobenzoxylated according to general procedure C in 88% yield. This material (145 mg, 0.33 mmol) was coupled to Z-Phe-His-OH[41] (145 mg, 0.33 mmol) according to general procedure B, except in the use of 4.5 equiv of DCC in three portions over 10 days. The product was purified by chromatography on silica gel (100 g) eluting first via 80:20:1 and then 85:15:1 chloroform/methanol/concentrated ammonia solution (v/v). Appropriate fractions were combined, evaporated, and lyophilized from *tert*-butyl alcohol to give the product in 26% yield: TLC, single spot, R_f(E) 0.67, R_f(F) 0.21.

(1*R*)-[1-[*N*-[(Benzyloxycarbonyl)-L-prolyl-L-phenylalanyl]amino]-3-methylbutyl]phosphinic Acid (28). *N,N,N',N'*-Tetramethylguanidine (41.5 μL, 0.33 mmol) was added to a suspension of Z-Pro-Phe-His-OH (from preparation of compound **21**, 176.5 mg, 0.33 mmol), [(1*R*)-amino-3-methylbutyl]phosphinic acid[9] (50 mg, 0.33 mmol), and HOBT (66 mg, 0.43 mmol) in DMF (3 mL) and stirred until solution was obtained. The solution was cooled to 0 °C, treated with DCC (150 mg, 0.73 mmol), and stirred for 1 h at 0 °C and 25 h at room temperature. The mixture was filtered and evaporated and the residue dissolved in 94:3:3 methanol/acetic acid/water (5 mL, v/v) and stirred for 60 min at 60 °C before evaporating to dryness. The crude product was chromatographed on silica gel (100 g), eluting with solvent system C, and provided the product in 37% yield: TLC, single spot, R_f(E) 0.26.

(1*R*)-[1-[*N*-[(Benzyloxycarbonyl)-L-prolyl-L-phenylalanyl]amino]-3-methylbutyl]phosphonic Acid (29). Z-Pro-Phe-His-OH (from preparation of compound **21**, 176.5 mg, 0.33 mmol) and [(1*R*)-amino-3-methylbutyl]phosphonic acid[9] (50 mg, 0.33 mmol) were coupled as described for compound **28**, except for the use of 2 equiv of base (83 μL, 0.66 mmol) and 5.25 equiv of DCC administered in two portions 24 h apart. Workup was as described for compound **28**. The crude product was purified by repeated chromatography on silica gel (100 g) first eluting with solvent system C and finally with solvent system A. Appropriate fractions were combined, evaporated, and lyophilized from *tert*-butyl alcohol to provide the product in 13% yield: TLC, single spot, R_f(D) 0.28, R_f(F) 0.27.

Acknowledgment. We thank Dr. W. Hoyle and Dr. J. Jack for helpful and stimulating discussions, S. Garman, S. Stutz, L. Derbyshire, P. S. Wardleworth, and S. Bennett for synthetic support, and Dr. R. Clarke, Dr. R. F. W. Jeffrey, F. Raschdorf, and M. McDonnell for analytical support.

Book Reviews

Molecular Neurobiology. Edited by N. G. Bazan and D. C. U'Prichard. Humana Press, Clifton, NJ. 1988. 398 pp. 22 × 28.5 cm. ISBN 0-89603-152-7. $85.00.

The volume is a glossy, hard-bound collection of reviews which are somewhat more general than the popular "Annual Reviews" series but are reasonably current. Readers of *Journal of Medicinal Chemistry* will find the volume generally well written, and the individual reviews do not suffer from the burdensome complexity of jargon which affect many current reviews. The editors have done a good job selecting a balanced view of current research topics in neurobiology. Potential readers, unacquainted with molecular biology, should not be deterred by the title. It is intended to imply the reduction of this discipline to the molecular events underlying neural phenomena. Certain chapters do deal with the applications of molecular biology to neurobiology; however, these sections are usually well explained and are readily followed. In this view the reader will not be disappointed with the contents. The contributors include a number of internationally recognized figures who are at the forefront of their fields. Each chapter begins with an abstract and an informative table of contents. The volume is, however, unnecessarily divided into four subvolumes differing in the season of 1987 when they were prepared.

The volume begins with a short preface by Dr. Soloman Snyder which is, true to form, informative and well written. In his short introduction, Dr. Snyder highlights the avenues of research in which the fastest progress is being achieved. If the reader desires a brief overview this section will be appreciated.

Dr. Barnstable addresses the process of cell migration in the developing retina. Anatomical and physiological events are effectively explained in juxtaposition with selected biochemical events. Considerable attention is directed to the role of cell surface markers and their role in guiding neural migration.

Drs. Soreq and Gnatt (Molecular Biological Search for Human Genes Encoding Cholinesterases) provide a textbook example of gene cloning as applied to neurobiology. The importance of cholinesterase in human disease is, however, somewhat overstated.

Dr. Greengard, a pioneer in the field of protein phosphorylation, gives a very good description of neuronal kinases and phosphoproteins. As specific examples, synapsin-1 and the 32-kDa dopamine receptor phosphoprotein (DARPP-32) are discussed in detail. The information is clear, and the tabular presentation is effective at providing a concise summary. Attention is also directed toward the dephosphorylation of phosphoproteins by specific phosphatases. Lastly, the physio- and pathophysiological roles of these proteins are discussed in sufficient detail as to impress the reader with the importance of this field.

Drs. Sibley and Lefkowitz contribute a chapter entitled "β-Adrenergic Receptor-Coupled Adenylate Cyclase. Biochemical Mechanisms of Regulation". The chapter is an excellent and current review of the regulation of β-receptor function. The phenomena of heterologous and homologous desensitization are presented effectively. Receptor phosphorylation, sequestration, and coupling to G-proteins are discussed in detail. However, the physiological importance of these phenomena are not discussed.

In contrast, the chapter by Duman and colleagues, "Molecular Biology of Inhibitory Amino Acid Receptors", is something of a

disappointment. What the review does not address is the cloning and deduced structure of these receptors. Instead, we are treated to hypothesis and conjecture. As a result we must conclude that the work with these receptors has not advanced to the level of the adrenergic or cholinergic receptors. The review is somewhat pedantic with such phrases as "Therefore, we leave the reader to examine the papers cited.".

Dr. P. C. Contreras et al. contribute a chapter entitled "Phencyclidine". As revealed in this chapter, important physiological lessons can be gained from drugs of abuse. The organization of the chapter is very logical beginning with the clinical features of phencyclidine abuse to behavioral and electrophysiological data in animals. Neurochemical alterations and interaction with chemically defined groups of neurons are also presented. The review ends with a discussion of potential, endogenous ligands for the phencyclidine "receptor". Additional data will be needed to establish the existence of a phencyclidine receptor distinct from the excitatory amino acid receptors.

Dr. A. Lander gives an excellent review entitled "Molecules That Make Axons Grow". The review begins by defining the growth properties of axons at the level of the growth cone. Neuronal trophism is contrasted with axon navigation as a basis for comparing the effects of a series of growth factors. Particular attention is directed toward nerve growth factor (NGF), laminin and fibronectin (two components of the substratum), and a glial-derived protease inhibitor. Comparisons of these growth factors are clearly presented in the text and in tabular form. The review closes with a discussion of the cellular mechanisms of neurite growth.

P. M. Salvaterra (Molecular Biology and Neurobiology of Choline Acetyltransferse) reviews the key control enzyme for the neuronal synthesis of acetylcholine. Owing to the conserved nature of choline acetyltransferase (CAT), considerable data has been gained with the use of the Drosophila enzyme. The chapter contains considerable, useful background information on the assay and purification of CAT. The genetics and immunological properties of CAT are presented. The immunohistochemical localization of CAT and its possible role in Alzheimer disease finish this review.

The importance of the cholinergic nervous system may have prompted the organizers to cover the topic in some detail. A chapter by J. Lindstrom et al. (Molecular Studies of the Neuronal Nicotinic Acetylcholine Receptor Family) closes the volume's coverage of the cholinergic system with a robst and detailed look at the nicotinic family of receptors. The neuronal and ganglionic nicotinic receptors are compared and contrasted with regard to their subunit structure and susceptibility to inhibition. The electrophysiology and functional effects of nicotinic receptor activation are well documented. Affinity labeling reagents and monoclonal antibodies as probes for the receptor provide useful, current information. Complementary DNA probes for neuronal nicotinic receptors and their protein products are discussed. The chapter ends with a synthesis of the data from ligand binding, immunological, and cDNA studies.

X. O. Breakefield and A. I. Geller (Gene Transfer into the Nervous System) have a compact yet detailed account of the methods for affecting the transfer of selected genes into the nervous system. The area, which holds enormous promise for the treatment of selected CNS disorders, is contemporary but not speculative. Considerable useful information and a thorough reference list will make this chapter particularly useful. Topics covered include DNA-mediated gene transfer, transgenic mice, retro and other viral vectors.

O. Civelli et al. (The Next Frontier in the Molecular Biology of the Opioid System. The Opioid Receptors) present the final chapter of this volume. The review explains the evolution in our understanding of multiple opioid receptors and why these subtypes are important. Protein chemistry with affinity chromatography is applied in a didactic way to reveal strategies for isolating opioid receptors. The μ receptor is featured. Regrettably, only two pages are devoted to the cloning of this receptor.

The book is well organized with glossy pages and large, legible print. The sample copy, however, was poorly bound. The binding separated from the pages within the first hour of reading (a disappointment for a volume costing $85). More significantly, the volume fills a necessary void between textbooks and review articles. The text should provide the interested yet unfamiliar reader with the background information required to pursue primary scientific communications.

Burroughs Wellcome Company **John F. Reinhard, Jr.**
3030 Cornwallis Road
Research Triangle Park,
North Carolina 27709

Inositol Lipids and Transmembrane Signalling. By M. J. Berridge and R. H. Michell. The Royal Society, London. 1988. viii + 436 pp. 21.5 × 30.5 cm. ISBN 0-85403-358-0. $42.00.

In the Preface, Berridge and Mitchell state "Given the worldwide intensity of work on inositol lipid signalling, we had an embarrassment of potentially excellent speakers upon which we could have called.". This particular statement is noted because as one reads about and comprehends this fascinating and forefront subject, one is struck by the similarity in the monolithic perspective that is presented concerning inositol lipids and transmembrane signalling. It is then that one recognizes that more than half the speakers and the authors of the chapters and most of the discussion participants, at one time or another, were associates of the editors. This aspect, therefore, may be one shortcoming of the book. In addition, the book would be of greater value as a reference book if it contained a comprehensive index. Other than these two shortcomings, the book is well written and organized and the cited references contain all authors, titles, and citations.

The subject matter has focused on the metabolic pattern of the inositol lipids that are used as substrate(s) for transmembrane signalling. The proliferation of the inositol phosphates, glycosyl phosphoinositides, and other inositides among different cell types makes for a very complex and at times contradictory picture. Several chapters described the evidence for a coupling or control of phospholipase activity through G-proteins; however, the unequivocal linkage would represent a major advance. The control of phospholipase C through G-proteins in human platelets and molecular cloning of multiple forms of neural protein kinase C, which interacts synergistically with calcium mobilization for a variety of cellular responses, provides insight for future investigation.

Berridge and co-authors provided an excellent overview of the importance of spatial and temporal aspects of inositol lipid signalling in cells. Subsequent chapters focused on the inositol signalling pathways as a primary transduction system for neural responses, as a link between insulin with its receptors to regulate cellular metabolism, and as a mediator in calcium homeostasis in several muscle groups. Others explored the importance of the phosphatidylinositol cycle in the development process, such as oocyte maturation, fertilization, and embryogenesis, and in the expression of cellular growth factors, such as neurohormones, neurotransmitters, and vasoconstrictors.

This book is based on the proceedings of a Royal Society discussion meeting, held on December 2–3, 1987. It was first published in *Philosophical Transactions of the Royal Society of London, Series B*, Vol. 320 (no. 1199), pages 235–436.

BioMolecular Products, Inc. **David W. Yesair**
P.O. Box 347
Byfield, Massachusetts 01922

Tumor Necrosis Factor/Cachectin and Related Cytokines. Edited by Benjamin Bonavida, George E. Gifford, Holger Kirchner, and Lloyd J. Old. Karger, Basel, Switzerland. 1988. viii + 276 pp. 17.5 × 24.5 cm. ISBN 3-8055-4755-2. $132.00.

This is a collection of presentations given at the International Conference on Tumor Necrosis Factor and Related Cytotoxins held in Heidelberg, Germany, in September 1987. As suggested by Otto Westphal in his "Opening Remarks" tumor necrotizing factor (TNF) appears to be identical with Valy Menkin's necrosin, a factor in the exudate of inflammation liberated by injured cells that in itself is damaging or toxic to normal cells. General areas covered in this book, dedicated to Valy Menkin, are Mechanisms of Action of Tumor Necrosis Factor in Vitro: Cytotoxicity,

Mechanisms of Action of Tumor Necrosis Factor in Vivo, Tumor Necrosis Factor and Therapy: Experimental, Tumor Necrosis Factor and Therapy: Human Malignant Diseases, Tumor Necrosis Factor and Therapy: Other Diseases, and Tumor Necrosis Factor and Therapy: Other Cytokines. Each section consists of three to eight individual articles written by international experts. A short subject, but no author, index is included.

In general the articles are up-to-date with many 1987 references. The quality of the print and paper is excellent. The book should be of major interest to those researchers in search of antiinflammatory agents as well as therapies for other diseases, e.g., malignancies, infections, and malaria, in which TNF has been implicated.

Staff

Horizons of Biochemical Engineering. Edited by Shuichi Aiba. Oxford University Press, New York. 1988. x + 374 pp. 19 × 26.5 cm. ISBN 0-19-856196-2. $98.00.

This book is an overview of the past, present, and future of biochemical engineering research. It is not intended to be an introduction to the subject, but to serve as a subreference that looks at this field that, following the development of recombinant DNA and hybridoma technologies, has had such a tremendous impact on medicinal research. The book is comprised of 26 papers contributed by international experts in biochemical engineering. It is divided into two categories. The first describes some specific studies in biotechnology, and the second consists of mini-reviews of currently studied topics. Subjects covered include physiology, kinetics, DNA technology, metabolites, measurement and control, and the problems of environmental protection. Each presentation is adequately referenced although only a few post-1985 citations were noted.

The subject index is adequate; there is no author index. In all likelihood the book will be of interst to specialists in biochemical engineering and of lesser value to general medicinal chemists.

Staff

Advances in Second Messenger and Protein Phosphorylation Research. Volume 22. Edited by Paul Greengard and G. Alan Robison. Raven Press, New York. 1988. ix + 401 pp. 16 × 24 cm. ISBN 0-88167-441-9. $79.00.

This volume continues the tradition of excellence of this series of review volumes. The present volume presents a mix of topics related to biochemistry and cell biology by recognized leaders in their respective disciplines. These reviews are all extensive discussions of their topics which will be of value to individuals interested in their content. This is not a book to be read from cover to cover but rather it will serve as a starting point for those individuals who want a quick survey of the state of the art as of 1988. Some of the reviews (e.g., Harper's summary of stimulus–secretion coupling) are so long and detailed that they could have been published as single-author monographs. Because of the importance of the general targets of the review series, this volume (as well as a series subscription) would be a good addition to an individual's personal library despite the high cost of the volumes in the series.

Abbott Laboratories **John W. Kebabian**
Abbott Park, Illinois 60064

QSAR-PC:PAR. By Robert A. Coburn. Biosoft, Cambridge, U.K. 1987. $199.00.

QSAR-PC:PAR, according to the author, is a medicinal chemistry regression machine for the purpose of conducting quantitative structure–activity relationship and physicochemical–activity relationship studies. *QSAR-PC:PAR* is not copy-protected, and the single-disk program package, which comes with a 52-page manual, has the following minimum hardware requirements: DOS 2.0, IBM PC, XT, AT (or compatible), 256 Kb of RAM (512 Kb recommended), one floppy drive, and a monochrome monitor. The program takes advantage of the following optional equipment: two floppy drives or one floppy drive plus hard disk, color monitor, EGA adaptor/monitor, and printer (parallel or serial). The program is very easy to install and can be up and running in a matter of minutes. The manual provides a several page introduction to QSAR, but it is obvious that a broader background is necessary to fully appreciate the application of this package. (The author does provide a short reading list of QSAR reviews and monographs).

The package contains four major programs: NOVO, DATAWELL, ALLREGR, and REGRES. NOVO performs Free–Wilson-type calculations, DATAWELL constructs a data matrix for use in ALLREGR and REGRES, ALLREGR surveys all correlations between all selected variables and reports correlation coefficients (it also suggests the maximum number of statistically justifiable independent variables that may be included in a regression and, in addition, provides a correlation matrix of independent variables that is helpful in determining which variables may be intercorrelated), and REGRES provides detailed multiple linear regression equations for for correlations identified by ALLREGR (complete with correlation coefficient, standard deviation, standard error in the regression coefficient, 95% confidence limits, Student t-test value, and F-statistic). A table of observed and calculated values, and residuals, is produced both in the order in which the data were entered and in an order sorted on Y-values. The activity of agents not included in the original study can be predicted by entering the appropriate values for the variables. It is also an easy task to add/delete agents or variables to a given regression analysis for "what if" studies. A final program, LIBRARIAN, stores the physicochemical data constants used by DATAWELL; these include, for example, Hansch π values, σ (meta and para) values, Swain and Lupton field and resonance constants, molar refraction indexes, and the sterimol L and B (B1 and B2) parameters. (It might be noted that capabilities exist for altering library values, for adding new constants and/or creating new libraries, and for adding 40 new functional groups beyond the 160 already included). The program can handle a maximum of 80 compounds and 20 independent variables at one time. Data can be input manually each time or can be entered once and stored; input can be reviewed and/or edited at almost any time. Results of regression analysis are presented on-screen or are directly piped to a printer (but can not be stored). Initial attempts at using this program revealed that it performed very quickly. However, in making several comparisons with results obtained using a mainframe computer and commercial statistics package (which, of course, required the tedious manual entry of all data including substituent constants), it was apparent that REGRES provided incorrect values for calculated variable coefficients and t-values. This was true even when using sample data provided with the program. This flaw was brought to the attention of the author, and a modified copy of the program was supplied. The new package (with version 1.1A of REGRES) performed correctly, and subsequent production versions will be corrected. (Apparently, Biosoft has agreed to mail a corrected version of REGRES, version 1.1A, to those who have already purchased the program.)

All in all, the one word that might be used to define this program is "spiffy". The manual contains some typographical errors, incorrect index numbers are given for one of the sample problems (page 33), and some of the program's 160 substituents are difficult to decipher (e.g., -$OCHOCH_3$). The manual also fails to mention that substituent constants for L, B1, and B2 are included in the program. Features not included that would be useful are more printer control, plotting capability (or at least an export function so that results might be plotted using some other program such as Lotus 1-2-3, or so that publication–quality plots might prepared using, for example, Freelance), and the ability to store the results of regression analyses. Hopefully, subsequent versions might take this into account. Nevertheless, considering that this is the first version of the program, these minor problems should not interfere with its application. Its simplicity and convenience of use sugggest that the program will be useful to researchers (though they will be required to do additional work if they wish to, for example, plot their results) and to graduate students studying QSAR. Its price is higher than

it might be (although this would not be the case if data-plotting capability were included, and if the manual provided a more in-depth treatment of QSAR, and perhaps, an appendix with tables of other substituent values that might be entered manually, if needed). But, then again, how many other PC programs can now do what *QSAR-PC:PAR* can do . . . and with the same ease?

Department of Medicinal Chemistry **Richard A. Glennon**
School of Pharmacy
Medical College of Virginia
Virginia Commonwealth University
Richmond, Virginia 23298

Books of Interest

Anatomy of Epileptogenesis. B. S. Meldrum, J. A. Ferrendelli, and H. G. Wieser. John Libbey and Company Ltd., London. 1988. vii + 187 pp. 17.5 × 25 cm. ISBN 0-86196-155-2. £24.00.

The Bioinorganic Chemistry of Nickel. Jack R. Lancaster, Jr. VCH Publishers, Inc., New York. 1988. xviii + 337 pp. 16 × 24 cm. ISBN 0-89573-338-2. $85.00.

Neural and Brain Modeling. Ronald J. MacGregor. Academic Press, San Diego, CA. 1987. xii + 643 pp. 15.5 × 23.5 cm. ISBN 0-12-464260-8. $89.00.

Chemiluminescence Principles and Applications in Biology and Medicine. Principles and Applications in Biology and Medicine. A. K. Campbell. VCH Publishers, Inc., New York. 1988. 608 pp. 17 × 24.5 cm. ISBN 0-89573-501-6. $196.00.

Clinical Pharmacokinetics. Malcolm Rowland and Thomas N. Tozer. Lea & Febiger, Philadelphia, PA. 1989. xii + 541 pp. 18 × 26 cm. ISBN 0-8121-1160-5. $38.50.

Microsomes and Drug Oxidations. J. Miners, D. J. Birkett, R. Drew, and M. McManus. Taylor & Francis Hemisphere, New York. 1988. x + 412 pp. 16 × 24 cm. ISBN 0-85066-361-X. $33.00.

A Guide to Materials Characterization and Chemical Analysis. John P. Sibilia. VCH Publishers, Inc., New York. 1988. x × 318 pp. 16 × 24 cm. ISBN 0-89573-269-6. $34.50.

Carbyne Complexes. H. Fischer, P. Hofmann, F. R. Kreissl, R. R. Schrock, U. Schubert, and K. Weiss. VCH Publishers, Inc., New York. 1988. xviii + 235 pp. 17.5 × 24.5 cm. ISBN 0-89573-849-X. $88.00.

Organic Luminescent Materials. B. M. Krasovitskii and B. M. Bolotin. VCH Publishers, Inc., New York. 1988. xi + 340 pp. 17.5 × 24.5 cm. ISBN 0-89573-662-4. $28.00.

Thermoregulation: Research and Clinical Applications. P. Lomax and E. Schonbaum. S. Karger AG, Basel, Switzerland. 1989. xiv + 250 pp. 17.5 × 24.5 cm. ISBN 3-8055-4921-0. $106.00.

Slow Wave Sleep. Physiological, Pathophysiological, and Functional Aspects. A. Wauquier, C. Dugovic, and M. Radulovacki. Raven Press, New York. 1989. xvii + 331 pp. 16 × 24 cm. ISBN 0-88167-497-4. $89.00.

Motion in Biological Systems. Max A. Lauffer. Alan R. Liss, New York. 1988. xiv + 259 pp. 16 × 23.5 cm. ISBN 0-8451-4261-5. $75.00.

Comprehensive B12. Chemistry–Biochemistry–Nutrition–Ecology–Medicine. Zenon Schneider and Andrzej Stroinski. Walter de Gruyter, New York. 1987. xi + 409 pp. 18.5 × 26.5 cm. ISBN 3-11-008239-X. $149.50.

Four-Aminobenzenesulfonamides. Part III. 6-Membered Heterocyclic Substituents and Miscellaneous Systems Solubility Data Series. Vol. 36. A. N. Paruta. Pergamon Press, New York. 1988. xxx + 523 pp. 19 × 28 cm. ISBN 0-08-034710-X. $120.00.

Enzyme Kinetics in Focus. D. Rickwood. IRL Press, McLean, VA. 1988. x + 77 pp. 15.5 × 23 cm. ISBN 1-85221-074-5. $11.95.