

2-CH₃-4-OH-C₆H₃NH₂, 2835-99-6; 3,4-(CH₃O)₂-C₆H₃NH₂, 6315-89-5; 3,5-(CH₃O)₂-C₆H₃NH₂, 10272-07-8; 4-SH-C₆H₄NH₂, 1193-02-8; 4-NH₂SO₂-C₆H₄NH₂, 63-74-1; 3-NH₂-C₆H₄NH₂, 108-45-2; 3-CH₃-O-4-NH₂-C₆H₃NH₂, 5307-02-8; 3-NH₂-4-CH₃-O-C₆H₃NH₂, 615-05-4; 4-CH₃CONH-C₆H₄NH₂, 122-80-5; 3-CH₃CONH-C₆H₄NH₂, 102-28-3; 4-CO₂HCH₂NH-C₆H₄NH₂, 2835-08-7; 4-NH₂CONH-C₆H₄NH₂, 21492-80-8; 4-NO₂-C₆H₄NH₂, 100-01-6; 4-NH₂-C₆H₄NH₂, 106-50-3; 1,3-benzodioxol-5-amine, 14268-66-7; 6-methoxy-3-pyridinamine, 6628-77-9; 2,5-pyridinediamine, 4318-76-7; 2-thiazolamine, 96-50-4; 4-methyl-2-thiazolamine, 1603-91-4; 4,5-dimethyl-2-thiazolamine, 2289-75-0; 2-benzo-

thiazolamine, 136-95-8; 4-chloro-2-benzothiazolamine, 19952-47-7; 6-nitro-2-benzothiazolamine, 6285-57-0; 3-methyl-5-isothiazolamine, 24340-76-9; 5-chloro-2-benzoxazolamine, 61-80-3; 5-methyl-1,3,4-thiadiazol-2-amine, 108-33-8; 1*H*-pyrazol-3-amine, 1820-80-0; 1*H*-indazol-5-amine, 19335-11-6; 2,1,3-benzothiadiazol-4-amine, 767-64-6; 6-methoxy-8-quinolinamine, 90-52-8; mitomycin A, 4055-39-4.

Supplementary Material Available: Full screening data for compounds submitted to the P-388 assay (8 pages). Ordering information is given on any current masthead page.

Book Reviews

Indoles. Part 4: The Monoterpenoid Indole Alkaloids (A Monograph in the Series "The Chemistry of Heterocyclic Compounds"). Edited by J. Edwin Saxton. Wiley-Interscience, New York, 1983. x + 886 pp. 17 × 24 cm. ISBN 0-471-89748-5. \$200.

The first known monoterpenoid indole alkaloids, strychnine and quinine, have been focusses of interest among organic chemists during the entire history of organic chemistry. In 1952 the indole alkaloid reserpine was isolated from Indian medicinal preparations that had been used for centuries in ayurvedic medicine. It was immediately applied clinically for the treatment of hypertension and a variety of psychiatric conditions. This stimulated great interest in indole alkaloids as potential chemotherapeutic agents, which was given an added dimension by the discovery of the clinically useful antitumor properties of the bis(indole) alkaloids vinblastine and vincristine in the late 1950's. Moreover, academic interest in the monoterpenoid indole alkaloids was further stimulated by Woodward's standard-setting total synthesis of reserpine in 1958. During this 30 years of recent activity in indole alkaloid chemistry, organic chemists have been able to use the authoritative Manske series of volumes to review the field; in addition, the *Specialist Periodical Reports* of the Royal Society of Chemistry entitled "The Alkaloids" have quickly established themselves as tremendously valuable to all practitioners in the field.

We are now indeed fortunate that a group of chemists distinguished not only for their research in the indole alkaloid field but also for their outstanding contributions to the review literature, including the Manske volumes and the *Specialist Periodical Reports*, have produced a one-volume text on the monoterpenoid indole alkaloids that provides an extremely thorough and well-written summary of the field in less than 1000 pages. It is always a pleasure to read the scientific and literary work of these contributors, and the quality of the contributions is extremely high. The book begins with a chapter on structural and biosynthetic relationships among the alkaloids (R. B. Herbert), which surveys the field and in so doing points clearly to numerous fascinating areas for further exploration. There follow a number of chapters reviewing the alkaloids by structural type; the recently investigated *Aristolelia* alkaloids (J. E. Saxton), the corynantheine-heteroyohimbine alkaloids (R. T. Brown), the yohimbine alkaloids (R. T. Brown), the sarpagine-ajmaline group (J. A. Joule), the uleine-ellipticine-vallesamine alkaloids (J. A. Joule), the *Strychnos* alkaloids (H.-P. Husson), the aspidospermine group (J. E. Saxton), the eburnamine-vincamine group (J. E. Saxton),

the ibogamine-catharanthine group (G. A. Cordell), the bis(indole) alkaloids (G. A. Cordell), the *Cinchona* group (G. Grethe and M. R. Uskokovic), and camptothecin (C. R. Hutchinson and Jun-Chao Cai). The book ends with an interesting, critical, and up-to-date study of pharmacology, biochemistry, and clinical applications of the monoterpenoid alkaloids (W. A. Creasey).

The book is very well produced, and the references are copious and accessible. The indexing is also good.

I consider this to be an outstanding one-volume treatment of this important topic by expert writers who have performed a valuable service to the chemical, biological, and pharmaceutical research communities.

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Pharmacochimistry Library. Volume 6. Quantitative Approaches to Drug Design. Edited by John C. Dearden. Elsevier, Amsterdam, 1983. x + 296 pp. 17 × 24.5 cm. ISBN 0-444-42200-5. \$57.75.

This book records the proceedings of the Fourth European Symposium on "Chemical Structure-Biological Activity: Quantitative Approaches", held at Bath, United Kingdom, September 6-9, 1982, and constitutes Volume 6 in the *Pharmacochimistry Library* series. The prime aim of the symposium-organizing committee was to provide a forum for the presentation and exchange of new work in the broad field of quantitative structure-activity relationship (QSAR) studies in drug design, reflecting the state of the art in QSAR at the present time. Within the framework of selected important subject areas in the field, key papers were given by 14 researchers, and, in addition, 6 contributed papers and 39 posters were presented, all of which are contained in this volume.

Following the symposium format, the book is nicely organized into six sections, each dealing with a major subject area: "Parameters and Modelling in QSAR", "Enzymes and Receptors", "Molecular Graphics and Conformational Studies", "Pharmacokinetic and Rate Effects in Relation to QSAR", "Series Design for QSAR", and "QSAR in Practice".

Altogether the book provides a wealth of information on current research activities in the broadly defined QSAR field. There is good balance in subject areas covered and between theoretical

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Altogether the book provides a wealth of information on current research activities in the broadly defined QSAR field. There is good balance in subject areas covered and between theoretical and practical aspects, and the content of new information is high. Quite striking is the extremely wide variety of topics covered, which provides a good sense of the breadth of this field at the present time.

The editor is to be commended for producing in a relatively timely manner a complete and well laid out volume which is essentially error free. A very good feature is the inclusion of poster presentations which, although brief, provides much interesting and completely new material. References are furnished for all but three talks and are up to date. There is a subject index, albeit rather abbreviated, and an author index. Although this book will be of limited interest to the general reader because of its highly specialized nature, it is a must for the QSAR practitioner. It succeeds in presenting the state of the art in QSAR in 1982.

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High Performance Liquid Chromatography in Forensic Chemistry. Edited by Ira S. Lurie and John D. Wittwer, Jr. Marcel Dekker, New York. 1983. xi + 439 pp. 16 × 23.5 cm. ISBN 0-8247-1756-2. \$65.00.

Volume 24 of the series of chromatographic science monographs edited by Jack Cazes, "High Performance Liquid Chromatography in Forensic Chemistry" makes a valuable contribution to the ever-growing literature of HPLC. Its eight chapters contain both general information about HPLC and specific forensic applications, most of which is on a level more suited to the experienced chromatographer. The introductory chapter is essentially a descriptive list of basic chromatographic equations. The second chapter contains a very complete and timely discussion of hardware, including that for interfacing HPLC with mass spectrometry. The chapter on adsorption and chromatography includes a long and detailed theoretical section; the various models proposed to explain retention behavior are discussed quite fully. The applications section, devoted exclusively to drugs, gives a great deal of information about chromatographic conditions and sample preparation, so that it may be possible to duplicate separations without consulting original sources. Bonded-phase columns are discussed in the next chapter. The theoretical section here is much shorter, since the theory of bonded-phase chromatography is still being developed, but the drug application section is just as comprehensive and detailed. Generalized analysis schemes for use in drug screening, a few nondrug applications, use of IR and MS for definitive identification, and practical considerations are covered.

The remaining third of the book contains more specialized material. A chapter is devoted to the use of liquid exclusion chromatography in the criminal laboratory. Another reviews the application of HPLC to forensic toxicology, including screening, quantitation for commonly encountered drugs in toxicological samples (such as benzodiazepines and barbiturates), and the combination of HPLC with immunoassay methods. Chapter seven discusses the HPLC of explosives, with emphasis on the advantages of mass spectrometric, thermal energy, electrochemical and electron capture detectors. The last chapter covers the analysis

of writing inks by HPLC, which is still in the early stages of development.

Every modern forensic laboratory should own and use this book. Experienced chromatographers will find it an extremely valuable resource, while those forensic laboratories not yet using HPLC may well be convinced to do so by reading some of the applications sections. There is also a lot of information of value to medicinal chemists, particularly those interested in depressants, stimulants, and the various alkaloids. References are relatively current with many from 1980 and a few from 1981. Overall, this is one of the best written and most original works on HPLC available.

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Somatostatin. Volume 3. Annual Research Reviews. Edited by Mary T. McQuillan. Eden Press, Montreal. 1983. 269 pp. 14 × 21.5 cm. ISBN 0-88831-164-8. \$38.00.

This is the third review volume on somatostatin prepared by the same author in an effort to organize and survey the steadily growing literature dealing with this peptide. The volume is organized by topic areas, each being preceded by a survey of knowledge as was recorded in 1979, and again as recently as late 1981, the date of the last papers cited. The work is divided into 16 sections, including an introduction and conclusions, and the division is logical and sensible, including some valuable generalizing categories, such as "Somatostatin as a Physiological Regulator of Hormonal Secretion and of Nutrient Flux", and "Somatostatin in Clinical Medicine". In each category, the author provides an interestingly written essay summary, quoting individual papers, and pointing out areas of difference and controversy as well as of concurrence. Approximately 470 references are provided in detail.

This publication will be valuable mainly to the academic endocrinologist and neuroendocrinologist actively involved in neuropeptide research who is able to follow his own narrow area rigorously but cannot follow the related literature with sufficient detail to keep from missing important, possibly relevant reports. Because it is so specialized, it is not a good source for the general endocrinologist or clinician but rather should be looked upon as an excellent research tool.

Volumes of this type serve a special purpose and should be encouraged. Although it is now possible, by the use of computer retrieval systems, to obtain lists of all publications in any area, and in most instances, to obtain printouts of the author's abstracts, the digestion and identification of key issues from as many papers as are now available in the somatostatin field is still a massive undertaking. Dr. McQuillan has done this for us, intelligently and sensibly. The main problem with books of this type is the inevitable one, namely, the delay in publication of so exhaustive a summary and review.

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S. Reichlin

Advances in Neurology. Volume 38. The Dementias. Edited by Richard Mayeux and Wilma G. Rosen. Raven Press, New York. 1983. 288 pp. 16.5 × 24 cm. ISBN 0-89004-696-4. \$36.00.

This excellent volume in the well-established series *Advances in Neurology* introduces new topics to the series with a multidisciplinary approach and surveys the current status of research on various types of dementia. The book contains 18 papers by some of the leading scientists in the area of basic and clinical aspects of this rapidly growing field in neurology and neurobiology. Some of the topics of great interest to neurochemists and medicinal chemists include an updated overview on the neurochemistry of Alzheimer Disease, emphasizing the cholinergic hypofunction as the best working hypothesis available for this wide-spread brain disorder (Davies). The "Cholinergic hypothesis" is also well-described in the chapter dealing with "Experimental Pharma-

ology of Alzheimer Disease", where different cholinergic symptomatic treatments are discussed in order to ameliorate cognitive dysfunctions reported in this progressive disease (Greenwald and Davis). Clinicians will find in this book a comprehensive discussion of diagnostic methods used to differentiate dementia from nondementing states (Gurland and Toner) and neuropsychological evaluations of cases of suspected Alzheimer Disease (Rosen). Improved imaging methods are only at their infancy in the study of the aging brain and senile dementia; however, they hold great promise for future objective diagnosis and evaluation. These new methods are outstandingly described by de Leon and George for computed tomography scanning and by Ferris et al. for positron emission tomography in dementia.

Another aspect that is covered in this book deals with biochemical changes in normal aging in the human brain (Cote and Kremzner) and neurophysiological changes of aging and dementia (Pedley and Miller).

Various categories of dementia other than senile dementia of Alzheimer's type, including cereb ovascular disease (Brust), Cruentfeldt Jakob disease (Traub), treatable dementias (Cummings), subcortical dementias (Benson), and dementia in Parkinson's (Mayeux and Stern) and Huntington's disease (Fisher at al.), are all thoroughly reviewed and provide a wide scope of updated findings, as well as new avenues for research.

Finally, the last two chapters describe the psychosocial impact of dementia and the long-term problems created by these tragic, devastating disorders on the family and on the community (Wilder et al.; Bennett).

This volume is well edited and it provides background for understanding the specific areas of this multidisciplinary subject; it is highly recommended for those desiring a comprehensive update and an in-depth understanding of various types of dementia.

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Books of Interest

Metal Ions in Biological Systems. Volume 16. Methods Involving Metal Ions and Complexes in Clinical Chem-

istry. Edited by Helmut Sigel. Marcel Dekker, New York. 1983. xxv + 397 pp. 16 × 23.5 cm. ISBN 0-8247-7038-2. \$75.00.

Organic Electrochemistry: An Introduction and a Guide, Second Edition, Revised and Expanded. Edited by Manual M. Baizer and Henning Lund. Marcel Dekker, New York. 1983. 1184 pp. 18.5 × 26 cm. ISBN 0-8247-6855-8. \$155.00.

Progress in Pesticide Biochemistry and Toxicology. Volume 3. Edited by D. H. Hutson and T. R. Robert. Wiley, New York. 1983. x + 449 pp. 16 × 23.5 cm. ISBN 0471-90053-2. \$112.95.

Organic Syntheses. Volume 61. Edited by Robert V. Stevens. Wiley, New York. 1983. xvi + 264 pp. 15.5 × 23.5 cm. ISBN 0-471-87038-2. \$49.75.

Formaldehyde: Toxicology-Epidemiology-Mechanisms. Edited by John J. Clary, James G. Gibson, and Richard S. Waritz. Marcel Dekker, New York. 1983. 296 pp. 16 × 23.5 cm. ISBN 0-8247-7025-0. \$45.00.

Advances in Chromatography. Volume 22. Edited by J. Calvin Giddings, Eli Grushaka, Jack Cazes, and Phyllis R. Brown. Marcel Dekker, New York. 1983. 344 pp. 16 × 23.5 cm. ISBN 0-8247-7049-8. \$49.75.

Methods in Enzymology. Volume 97. Biomembranes. Part K. Membrane Biogenesis: Assembly and Targeting (Prokaryotes, Mitochondria, and Chloroplasts). Edited by Sidney Fleischer and Becca Fleischer. Academic Press, New York. 1983. xxiv + 681 pp. 16 × 23.5 cm. ISBN 0-12-181997-3. \$65.00.

Advances in Enzymology. Volume 55. Edited by Alton Meister. Wiley, New York. 1983. v + 569 pp. 16 × 23.5 cm. ISBN 0471-86860-4. \$55.00.