

Book Reviews

Medicinal and Pharmaceutical Chemistry. By Harkishan Singh and V. K. Kapoor. Vallabh Prakashan Publishers, Delhi. 1996. viii + 671 pp. 19 × 25 cm. ISBN 81-85731-00-4. \$70 (Rs 560).

This text, one of many on the subject, is the only one as far as is known to this reviewer that is written in English by only two authors, both of whom teach at the same university (Panjab University). Consequently this text has a uniformity of style and substance that is generally not the case for multiauthored text books. Professors Singh and Kapoor are to be congratulated for putting together in one text what they believe are the essential components of a course in medicinal chemistry. The book focuses primarily on organic medicinal substances of natural or synthetic origin currently in use in India.

Five introductory chapters discuss the chemical naming and graphics used for drug substances of organic nature; International Nonproprietary Names (INN's); physiochemical and stereochemical aspects and drug action; and pharmacokinetics. The remaining 41 chapters cover all of the pharmacological agents in therapeutic use currently in the British Pharmacopoeia (BP) (1993) and addenda 1994, and the Indian Pharmacopoeia (IP) (1985) and addenda 1989 and 1991, from General Anaesthetics (chapter 6) to Disinfectants and Antiseptics (chapter 45). Brief descriptions are given of the uses of the official drugs and their modes of administration. The dose ranges are also provided. The pharmaceutical formulations of drugs as described in the BP or IP or both are listed. The prominent trade names as well as the nonproprietary names used internationally and in India are mentioned for each of the drug substances. A final chapter, unusual in current texts on Medicinal Chemistry, is a chapter on Organic Pharmaceutical Aids (chapter 46) which discusses substances which are used in the manufacture or compounding of pharmaceutical preparations; such as preservatives, antioxidants coloring, flavoring, sweetening agents, and emulsifying agents. The text also includes an excellent glossary of medical terms and a very complete index.

Professors Singh and Kapoor have done a heroic job of putting together all this information of importance to students of pharmacy and those wishing to have a very basic knowledge of drug substances. It is almost impossible to find such information as names, chemical structure, mode of synthesis, therapeutic uses, doses, solubility, and stability in one text.

Inevitable in an undertaking of such a broad scope are some shortcomings. This reviewer's primary concern is that the text is somewhat outdated in that many of the most popular drugs currently in use and not yet in an official compendium are not mentioned. Alternatively, many drugs of practically no current importance (at least in the US) are included. The discussions on the mode of action of most of the drug substances is at a very elementary level and does not include our current knowledge in molecular pharmacology. Another disappointment is the poor presentations of the stereochemistry of drug substances. Examples: page 172 shows the structure of (-)-ephedrine, (+)-ephedrine, (-)-pseu-

doephedrine, and (+)-pseudoephedrine as two-dimensional structures, yet under the chapter 2 on chemical naming and graphics of organic compounds, these same four structures are shown in their *threo* and *erythro* Newman projection formulae (p 21). Similarly on p 155, the correct stereochemistry of morphine is shown, yet its acid-catalyzed rearrangement product does not show the stereochemistry of (*R*)-(-)-apomorphine.

A shortcoming of this text is the complete lack of any references or suggestions where the student can find additional information on a particular topic.

Overall, this textbook will undoubtedly provide an excellent learning and teaching tool to the undergraduate pharmacy student in India. These authors should be encouraged to rapidly update this text to make it more current for today's and tomorrow's students in pharmacy and medicinal chemistry.

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Books of Interest

Advances in Experimental Medicine and Biology. Volume 403. Taurine 2. Basic and Clinical Aspects. Edited by Ryan J. Huxtable, Junich Azuma, Kinya Kuriyama, Masao Nakagawa, and Akemichi Baba. Plenum Publishing Corporation, New York. 1996. xiii + 658 pp. 17 × 25.5 cm. ISBN 0-306-45385-1. \$139.50.

Methods in Molecular Biology. Volume 72. Neurotransmitter Methods. Edited by Richard C. Rayne. Humana Press, Totowa, NJ. 1996. xi + 271 pp. 16 × 23.5 cm. ISBN 0-89603-394-5. \$69.50.

Therapeutic Uses of Trace Elements. Edited by Jean Neve, Philippe Chappuis, and Michel Lamand. Plenum Publishing Corporation, New York. 1996. xv + 451 pp. 17 × 26 cm. ISBN 0-306-45485-8. \$129.50.

Research in Organ Transplantation and Tissue Grafting. Edited by P. Herve, G. Rifle, D. A. Vuitton, G. Dureau, P. Bechtel, and E. Jostrabo. John Libbey & Company Ltd., England. 1996. xx + 1436 pp. 17.5 × 24.5 cm. ISBN 0-86196-383-0. \$366.00.

Reductions in Organic Synthesis. Recent Advances and Practical Applications. ACS Symposium Series 641. Edited by Ahmed F. Abdel-Magid. American Chemical Society, Washington, DC. 1996. x + 228 pp. 16 × 23.5 cm. ISBN 0-8412-3381-0. \$89.95.

Iron Nutrition in Health and Disease. Edited by Leif Hallberg and Nils-Georg Asp. John Libbey & Company, Ltd., England. 1996. viii + 364 pp. 17.5 × 24.5 cm. ISBN 0-86196-544-2. \$83.00.

Applications of Chitin and Chitosan. Edited by Mattheus F. G. Goosen. Technomic Publishing Company, Inc., Lancaster, PA. 1997. xi + 336 pp. 15 × 23 cm. ISBN 1-56676-449-1. \$165.00.

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