subject matter and which detract from the overall value of the text. The authors' use and definition of the terms monocistronic and polycistronic are incorrect and confusing, and the description of an ELISA assay is not the experimental design more commonly employed. The structure of the nonpeptidic HIV protease inhibitor U-96988 is in error, and the influenza M_2 ion channel is not accurately or overtly represented in the depiction of the virus, surprising given the focus of subsequent discussion on amantadine and the historical importance of this agent. The contention that integration of the HIV genome into the host cell chromosome is not essential for viral replication is clearly incorrect and seems to have been carried over from the description of HBV. In addition, ribavirin is not, as stated, a natural product.

Despite these shortcomings, *Antiviral Chemotherapy* is a useful text that is modestly priced and should appeal not only to its target audience but also to those individuals embarking on a career in the pharmaceutical industry.

Nicholas A. Meanwell

Department of Chemistry
The Bristol-Myers Squibb Pharmaceutical Research Institute
5 Research Parkway
Wallingford, Connecticut 06492

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Introduction to Medicinal Chemistry: How Drugs Act and Why. Alex Gringauz. Wiley−VCH, Inc., New York. 1997. xiii + 721 pp. 18.5 × 26 cm. ISBN 0-471-18545-0. $89.95.

"This book is intended to be useful, indeed necessary, to students pursing a career in the health sciences...the pharmacy student...will find this book invaluable. * * * It is anticipated that this publication will also be used at the early graduate training level..." states Alex Gringauz in his preface to this volume, explaining that "(t)his book is not intended for the medicinal chemistry practitioner...". But in spite of this, the promotional material provided by the publisher on the back cover indicates "(i)t will be extremely useful...for research scientists entering the pharmaceutical industry."

The book consists of 15 chapters that discuss basic considerations and mechanisms of drug activity, drug metabolism, antineoplastics, analgesics, antimocrobials, cholinergic and adrenergic agonists and antagonists, cardiovascular drugs, CNS drugs, antiulcer drugs, local anesthetics, steroids, and new developments. These divisions result in some strange bedfellows: both thyromimetic drugs and insulin mimetics appear in the chapters devoted to cardiovascular drugs.

The exposition is at once subject to both the advantages and disadvantages of a single-author text. On the one hand, a single author can uniquely provide a unified treatment of an entire field. But on the other, it is extraordinarily difficult for a single author to be successful in the present case given that medicinal chemistry today is a broad, complex, and rapidly changing field. These difficulties become painfully apparent in the case of the references to the chapters, which tend to be quite old—for example, no later than 1989 in the chapter on anticancer drugs—or even nonexistent—for example, in the case of the chapter on drug metabolism. It is not only the references but also the text itself that are out of date in places. For example, the crucially important topic of G-protein-coupled receptors is absent altogether in the discussion of receptors in the chapter on the mechanism of drug action.

Except for a huge number of structural formulas, the volume is almost devoid of illustrations, and the few that are presented, for example, in the chapters on cholinergics and CNS drugs, are amatueurish line drawings. Most of the formulas have been (badly) drafted, rather than set in type. In my mind these are all serious defects in a book intended for students.

We live in a competitive world, and this book will have to compete against other texts, notably Foye's *Principles of Medicinal Chemistry* (4th edition, 1995), available at a similar price. Even though it is now 2 years old, Foye's is a far better book. It is written by a panel of experts, represents current knowledge, has large numbers of useful references, is beautifully illustrated, and is produced using clear, typeset formulas.

Manfred E. Wolff

Intellepharm, Inc.
Laguna Beach, California 92651-2809

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Annual Reports in Combinatorial Chemistry and Molecule Diversity, Volume 1. Edited by Walter H. Moos, Michael R. Pavia, Andrew D. Ellington, and Brian K. Kay. ESCOM Publishers, Leiden, The Netherlands. 1997. xiii + 354 pp. 17 × 24.5 cm. ISBN 90-72199-23.5. $97.00.

This volume is the first of a new annual review series that will follow progress in the exploding field of combinatorial chemistry. The book has chapters written by 33 different authors who are experts in the fields surveyed. Combinatorial chemistry and molecular diversity are emerging disciplines, and this volume does an excellent job of bringing the reader up to date. The book is divided into three major sections: Combinatorial Chemistry, Combinatorial Biology and Evolution, and Informatics and Related Topics. All together, there are 1464 references in 20 different chapters. There is a fairly extensive subject index, but its coverage is not uniform. The keyword indexes for the biological topics seem to be thorough, whereas the indexes for the chemical topics are less so. There are, for example, no index terms for biphenyl scaffolds, the Mitsunobu reaction, or the Suzuki reaction, even though these topics are detailed in several chapters. In addition, some index terms are odd, such as Microsoft Windows and fuzzy. Overall, however the volume is packed with good information.

Each major section is launched with excellent overviews, following which chapters continue with more focused topics. The first chapter in Section I, by Kiely (Houghten Pharmaceuticals), describes techniques for