Combinatorial Strategies in Biology and Chemistry. By A. Beck-Sickinger, P. Weber. Wiley: Chichester, **2001**, cloth $75.00; ISBN 0-471-49727-4, 194 pp.

There is no doubt that combinatorial chemistry has been one of the most significant developments in the pharmaceutical industry in recent years. The advent of automated processes, parallel synthesis and compound libraries has revolutionized the way that we approach drug discovery. This text has been written with these advances in mind and sets out with the aim to describe the origins, basics and techniques used in both combinatorial chemistry and molecular biology. It notes that the material described should be appropriate for postgraduate or undergraduate students studying medicinal chemistry or molecular biology, or to scientists working in the pharmaceutical industry with either a chemical or biological background. Indeed, if this book met all of these goals then this text would be a significant addition to our libraries and a compelling read for all chemistry postgraduates.

The account opens with an introduction to combinatorics and is not afraid to delve into a few well-chosen examples to illustrate the diverse structural ensembles present in chemistry and biology. This is followed by a detailed treatment of peptide libraries and their synthesis on solid support, including discussion of the most common resins found in organic synthesis. Although a chapter is devoted to the synthesis of nonpeptide libraries, featuring peptidomimetics, carbohydrates and nitrogen-containing heterocycles, this consideration is brief and serves really just as a guide and overview rather than an in depth study; a shame considering that this material is probably the most relevant for industrialists or postgraduate students. In spite of this lack of detail, good discussion is given over to mixture techniques, split synthesis, library deconvolution and encoding/decoding methods, making this a valuable introductory text. The area of the book that I found to be the most enjoyable concerned parallel synthesis and automation. For those readers that have not had the opportunity to work with synthesis robots, this section provides an in-depth analysis, with excellent photographs, of a number of typical semiautomated and fully automated machines for solid and solution phase synthesis, spot synthesis on cellulose membranes, reaction blocks and automated reaction platforms. Following this highlight, subsequent chapters that discuss molecular biological techniques and the analysis of libraries seem almost to get lost in the noise in spite of their good content.

In considering the book as a whole, I conclude that it is an excellent addition to the bookshelf if you have a strong interest in the area, want to pick out key chapters for perusal by postgraduate students or if you just want to find out, broadly, what the combinatorial fuss is all about. The book is very well illustrated, contains a good glossary of terms and is extremely well referenced. However, although this may be quite appropriate for the more confident and able chemistry students or employees, weaker undergraduates or readers with little experience of the chemical literature will, I am sure, find this aspect of the book extremely difficult to unravel. Consequently, only quite gifted undergraduates will find this a valuable text and only then if they are taking modules in medicinal chemistry and more specifically combinatorial chemistry. It is questionable whether this book reaches its objective, being equally relevant to chemists and biologists alike. In spite of this, I found the book a strangely enduring read, with great photographs and useful references to the literature, and so I do hope that many chemists, and even biologists, will take the time to look at it. If you do, I think you might be quite pleasantly surprised.

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Synthesis 2002, No. 8, Print: 04 06 2002.
Art Id.1437-210X,E;2002,0,08,1132,1132,ftx,en;B10802SS.pdf.

ISSN 0039-7881