

## BOOK REVIEWS

*Biochemistry (Third Edition)*

by R. C. Bohinski  
Allyn and Bacon, Boston, 1979  
xviii + 600 pages. £9.75

I have not had the pleasure of meeting Robert Bohinski but I would certainly like to do so for he is an enthusiast for his subject and surely this is an essential character of an author of a general text book. This is the third edition of his well-known book. Since he has so far produced a new edition at intervals of three years it must have become a major pre-occupation for him.

The book is nicely printed in two colours and the diagrams are well laid out. The price is very reasonable for the 600 pages. Since the book is a mine of information it is surely a recommended buy for teachers and all those who have a broad interest in the subject. Whether it is also to be recommended for students is more difficult to decide.

The style is chatty as though the author were speaking to the student reader: 'Throughout this course. . .', 'In fact, in one way or another you will be learning about proteins throughout most of this course', 'Living cells must do several things in order to carry out normal life processes and remain alive'. The style may be popular with students but for my part I wish the writing were more succinct for I believe that as teachers we should attempt to be lucid. In short I much prefer the style of Lehninger.

The presentation is very American — even to the extent of using unusual words like 'commonality' (page 156). As an Englishman one also gets a bit irritated by the way in which famous Americans deservedly are mentioned by name but those who did their work elsewhere have to be Nobel Prize winners to gain a mention.

It is of course a really formidable task to write a general text book of biochemistry. I would not quibble with the selection of topics nor with the order in which they are mentioned even though this be unusual in some respects. I also found the endeavour to hold the reader by writing a narrative led to unnecessary repetition as in Methods (chapter 2) and Proteins (chapter 5). It is curious how the author sometimes makes an unexpected selection as with 'scotophobin' the peptide which is claimed to have a relevance to memory (page 112). I was also a little disappointed that in the limited space available for a description of recombinant DNA technology so much prominence is given to the safety debate especially since examples of the possible dangers are hardly mentioned.

The chapter on the biosynthesis of nucleic acids and proteins is rather a muddle. I am not convinced that it is good to start with transcription before replication of DNA especially when the substrates are constantly referred to as triphospho-ribonucleotides rather than the nucleosides. The piece on reverse transcriptase is poor and the space wasted on speculation concerning human cancers. If one is to mention this subject then surely a reference to Burkitt's Lymphoma would be helpful (page 246). There must be fewer than 60 different tRNAs in view of the Wobble phenomenon (pages 263 and 276). If one is to deal with initiation (page 265) then it is a pity not to show the initiator tRNA etc. associating with the small ribosomal subunit rather than the complete ribosome. Finally

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on page 271 Nirenberg's cell-free system was not 'soluble'. These and other matters are the points that I would wish to discuss with the author.

The proof reading is good but not perfect. On pages 248–249 I found [ $^3\text{H}$ ]-labeled,  $^3\text{H}$ -labeled, and  $\text{H}^3$ -labeled. There is plenty of work for those who are working on the 1982 edition.

The book certainly grew on me the more I studied it. It is not for medical students but science students will find it an excellent source book. Those who are lacking an inspiring teacher may well find the chatty style helps them to keep going.

P. N. Campbell

### *Pocket Programmable Calculators in Biochemistry*

by John E. Barnes and Alan J. Waring  
Wiley; Brisbane, Chichester, New York, Toronto, 1980  
xxii + 362 pages. £15.82

The title of this book is somewhat misleading since it attempts neither to review the range of programmable pocket calculators on the market, nor to introduce the principles of programming to the novice; nor, as is made clear in the preface, does it represent an exhaustive compilation of the types of problems encountered in Biochemistry and Molecular Biology. Instead it takes two examples of readily available instruments, the Hewlett–Packard HP67/97 and the Texas Instruments TI-58/59, and presents a selection of 27 programmes, listed and annotated to help the laboratory worker solve a series of problems encountered in day-to-day data analysis without recourse to central computing facilities or more costly minicomputers. Both calculators are fully programmable, providing conditional branching sub-routines and magnetic card facilities and the various functions they offer are given an unbiased comparison. The most obvious difference is in the notation used. Hewlett–Packard have standardised on reverse Polish, while Texas Instruments use an algebraic operating system.

The main body of the book consists of the listings which include problems of ionisation phenomena, behaviour of macromolecules in solution, sedimenta-

tion, ligand binding and kinetics, thermodynamics, spectroscopy and isotopes. While the subject coverage is commendably wide, the book is naturally selective in choice of examples. Each chapter under the above headings begins with a brief outline of the theory underlying the methodology which is then followed by the listings and user instructions in the two notations. Unfortunately, the precise purpose of each programme is not always clear until one deduces it from the example problem and solution at the end of the chapter.

The novice with limited programming skills will be disappointed if he expects to find here a substitute for a thorough study of the owners manual and programming guide. In fairness, the authors are at pains to point out that this was never their intention.

In short, this book does for data analysis in Biochemistry what the manufacturers do for Mathematics, Statistics and Accounting in their own 'back-up' software. Its declared aim to provide usable well-documented calculator solutions to a wide variety of Biochemistry problems has been largely achieved but one wonders how long it will be before the next generation of chips outdates it.

D. Robinson