

Despite these limitations, Palmer has succeeded in providing a good overview, which is further supported by the “problems” offered at the end of the sections. In addition, theoretical aspects are clearly illustrated by practical examples in many cases. Thus, this book is certainly a very good introduction to enzymology, and is especially recommended for students of chemistry, biochemistry, and biology.

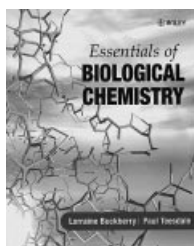
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### **Essentials of Biological Chemistry.**

By *Lorraine Buckberry* and *Paul Teesdale*. John Wiley & Sons Inc., New York 2001. xvii + 219 pp., softcover \$ 35.00.—ISBN 0-471-48906-9

Research carried out at the interface between different scientific disciplines often proves to be extraordinarily fruitful and exciting. Sometimes a new scientific discipline evolves out of these endeavors, and ultimately emancipates itself by choosing a new name, which eventually appears in the titles of new textbooks. Biological chemistry, also called chemical biology, is such a scientific discipline that has emerged at the interface of chemistry and biology within the last few decades.



It addresses biological questions using chemical tools.

The authors have written an introductory undergraduate textbook of biological chemistry. Within seven chapters they introduce the reader to the physical chemistry of the cell, and the structure and function of proteins and nucleic acids. Considering the limited space in the book, the authors do a very good job in presenting the most fundamental concepts of this subject as a result of their very concise writing style. Nevertheless, these chapters do not reach the intellectual depth of the corresponding chapters in classical biochemistry textbooks such as those by Stryer or Voet and Voet, which admittedly are addressed to a different type of reader. The last chapter describes two case studies which illustrate the application of the concepts discussed.

The strength of the book can be seen in the excellent didactical presentation of the material, to which the authors have applied much creativity and imagination. At the beginning of each chapter the learning objectives are presented, which motivates the reader to grasp the underlying principles of the following material. At the end of the chapter a short summary, some self-test questions, and a fun crossword puzzle help the reader to digest and consolidate the new knowledge.

At several points the reader will find it helpful to consult the web site which is linked to the book. This provides supplementary material, interactive manipulatable protein structures, and solutions to the self-test questions of each chapter.

It is hard to understand how such a large number of errors and mistakes could have found a way into this book.

Errors of the quantity and type seen here cannot be tolerated in an introductory textbook, where the student is meeting the subject for the first time. These mistakes cannot always be so easily recognized and casually ignored as on page 94, where “prothetic” groups of enzymes are discussed, or on page 24, where the “adsorption” of light is mentioned. It is more likely that the reader will be left disoriented and puzzled when, for example, he is confronted with repeated or varied misspellings of “Maxim–Gilbert” sequencing or “Lineweaver–Burke diagrams.” Nor are these errors limited to the text, many also occur in the figures. To name just one example, in the figure presenting the cofactors (Table 5.1) the structure of coenzyme A lacks a methylene group, while the structure of cobalamine contains no less than three errors. The frequent failure to show stereochemical details of the structures, and the “arrow pushing” often shown in the proposed mechanisms (which is reminiscent of the “lasso chemistry” of former times), seems to be of minor concern in this context.

This lack of diligence leaves a bitter taste after reading the book. The web site linked to the book could help to compensate for that, by posting a directory of errors, until a corrected new edition can be printed. Although the authors have introduced some interesting didactical features in this book, it can be stated that THE textbook of biological chemistry still remains to be written.

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