

Book reviews

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Apoptosis and cell cycle control in cancer. Thomas NSB, ed. Vol 3 in the series **UCL Molecular Pathology**. Latchman DS, series editor. (Pp 256; £65.00) Bios Scientific Publishers. 1996. ISBN-1-872748-89-9.

This book provides an enlightening in-depth account of developments at the cutting edge of research into the molecular basis of cell cycle control and apoptosis and discusses their contribution to the understanding of carcinogenesis, and their potential implications for the treatment of cancer. Each section is written by leading experts in the field, but as with other multi-author publications, there is a large degree of variation in quality. The first half of the book is gripping and well structured, discussing the interactions of a wide array of oncogenes and tumour suppressor genes, and includes an intricate dissection of the cell cycle using time-lapse videomicroscopy, the incrimination of cyclins as oncogenes, an overview of proteins interacting with p53, an introduction to the "Rb family", and culminates in the exciting prospects of inducing cell death specifically in cervical cells by interfering with the HPV-E6/p53 interaction. The remaining chapters, however, are confusing and contradictory, perhaps inevitably repetitive, or in places too basic and superficial.

As a whole, this book makes for an enjoyable and stimulating read, providing fresh insight into a complex and rapidly expanding field, and can be highly recommended in spite of the somewhat prohibitive price.

D A MUIR

Immune Reactions. Sedlacek H-H, Moroy T. (Pp 581; DM 148.00). Springer Verlag. 1995. ISBN 3-54-58957-0.

The rapid expansion of knowledge in immunology over recent years has made it difficult for immunologists, let alone anyone

else, to keep track of what information is available and where it can be found. This book attempts to address this problem by providing tables, figures and schematic diagrams summarising many key areas of the subject. It succeeds in this aim to some extent, but not completely.

The book is based on lectures given by the authors and gives the impression of being a transposition of lecture notes and transparencies, consisting as it does of tables and diagrams with only brief over-view sections of "continuous prose". The authors do not intend it to be a book for the uninitiated, which it clearly is not: it is a solid collection of facts for reference by those already in the know rather than a text from which to learn the subject from scratch.

Some of the information remains rather cryptic—particularly in diagrams where all the terms and symbols are not explained. In many instances (though not all) original source references are given, but the contents of the book should be comprehensible in their own right.

The contents range broadly through molecular, cellular, physiological, pathological, and therapeutic aspects of immunology although it could not be, and is not, fully comprehensive. However, the biggest omission is the index—that is, there isn't one! This seems particularly odd for a book which would be primarily used as a reference for specific topics rather than for general reading.

In summary, this book represents a unique collection of immunological information which could form the starting point for researching a topic, or could suffice as a reference to specific facts.

I TODD
C DAVENPORT

Measurement in Laboratory Medicine. A Primer on Control and Interpretation. Strike PW. (Pp 262; £25.00, including Minisnap floppy disc of computer routines. 1996. Butterworth Heinemann Ltd. ISBN 07506-2259-8.

In this paperback book, the author brings a personal approach to three central themes: the accuracy of what we measure; the precision of what we measure; and the clinical utility of what we measure. It is not a textbook of statistics; rather, it deals with the mathematical and statistical ideas underlying measurement in clinical laboratories. Although most of the examples are taken from clinical biochemistry, the ideas it presents are relevant across the whole field of pathology.

The book is an updated version of core sections from an earlier publication (Strike PW. *Statistical methods of laboratory medicine*. Oxford: Butterworth Heinemann, 1991), and is an idiosyncratic mixture of the highly mathematical and the highly readable. The first chapter starts with an introduction to

what assay measurement is all about and subsequent chapters include Test Interpretation; Discriminant analysis; Assay Method Comparison Studies; and Regression. Topics considered in detail include estimating error variance components; analytical goals for assay imprecision; Cumulative Sum charts; screening tests; and computer assisted diagnosis. It assumes some knowledge of basic statistical ideas and is not a book for the mathematically faint-hearted, as the opening equation on page 1 shows:

$$"X_i = \zeta_i + \epsilon_i."$$

I read the book with great interest (but with some difficulty—a table of Greek characters would have helped!) and I think that it is a very valuable and thoughtful discussion of the mathematics behind analytical measurement. The floppy disc included with the book—Minisnap—is a set of routines for IBM PC compatible computers which enable processing and statistical analysis of laboratory data. ROC curve analysis, confidence intervals in regression, outlier identification, and many other techniques are provided.

My own view is that the only useful statistical book is the one which is comprehensible to an individual reader; and before buying a book, I advise a student to open it at random and read a sentence. If the sentence can be understood, it is obviously the right book for that student. Carried out randomly three times on this book, my test gave these three sentences:

"Each of the arrows is fired at a different monkey, and count taken of the number of trees that the monkey clears before falling, paralysed, to the forest floor."; "If the MVN distribution is a plausible model for the behaviour of the test variables in each of the classification groups, the linear discriminant classification rule of eq. (3.11) will (given $S_I = S_{II}$) be optimal in the Bayes' minimum misclassification cost sense, *ie* there simply isn't a 'better' way of classifying the test subjects given the test variables to hand."; and "If we evaluate the function $f(x)$ for a specific value x_i , what we get is the height of the distribution curve at the point x_i , not the probability of x_i , which is logically zero if you follow the reasoning above (a rich if trivial source of paradox for those who enjoy the appearance of wisdom at the expense of the real thing)."

If you can understand all three sentences, this book is a must. It ought to be read with pleasure and profit by everyone of mathematical inclination in laboratory medicine. Unfortunately, I feel that its ideas and approach go beyond the reach of the average worker in the field; and although it ought to be in the library of every pathology laboratory, few readers will struggle through more than a few pages. However, even those few pages will probably be useful.

G S CHALLAND