In view of the importance which precise determinations of three-dimensional structures of proteins, nucleic acids and viruses have had in these areas, I was rather disappointed by the discussion of these structures. Certainly, it is difficult to convey the three-dimensional character of these structures in a diagram or photograph, but I had hoped to see more of the basic principles of their design stated. For example, there is no explicit statement that it is the amino-acid sequence in a protein which in a given environment determines its three-dimensional structure, and the basic principles of the construction of simple viruses from identical protein subunits is inadequately presented. This is a great pity, because the elegance of these solutions to the problems of efficient design makes a ready appeal to the lay audience.

My most serious criticism concerns the plates and figures. Magnificent though many of these are, a number of the figures suffer from minor errors which more careful supervision of the artist would have avoided. Also, it is not always clear which caption refers to which illustration.

I suppose the question this review has to answer is whether I would choose this book if I had six guineas to spend on a Christmas present book for a sixteen year old niece or nephew. I think the answer is yes; in spite of the fact that it is expensive and there are features which could be improved, it is an exciting and stimulating book covering a wide range of topics in medicine and biology.

W. FULLER

AMINES ACTIVE IN MAN

Biologically Active Amines found in Man

Their Biochemistry, Pharmacology and Pathophysiological Importance. By Franz Franzen and Kurt Eysell. Pp. vii + 244. (Pergamon: Oxford, London and New York, October 1969.) 100s; \$13.50.

In 1951, when I was a research student, Guggenheim produced his book *The Biogenic Amines* which I read with interest and enjoyment. When I was asked to review this book, therefore, I looked forward to the task because I felt that an up-dating of Guggenheim was long overdue. Indeed, the authors refer to the considerable increase in knowledge since his time, and so it is all the more regrettable that this book includes very little of this knowledge. To say that the book is out of date is of little help, so I will let it speak for itself. Of 1,900 references, which make up seventy-five pages, less than 5 per cent can be post-1964. The latest reference to dimethoxyphenylethylamine, which has been discussed many times by different workers, is that of Friedhoff and van Winkle (1962), who considered that "any conclusions based on this result (of DMPE in schizophrenic urine) would be premature". The authors can be the only people so unaware of the current situation.

The monoamine oxidases are very well reviewed up to about 1945, after which time an ever diminishing amount of work seems to have been done on them so that by about 1962 all work on the subject seems to have ceased. MAO inhibitors are not mentioned in the brief index but an italicized sentence in the text refers to "compounds alien to the body which are able to inhibit the amine oxidases". Again, it would be assumed from this book that all workers lost interest in these compounds in the early sixties as no work has been reported since. Of course, it could be claimed that these synthetic compounds are outside the scope of this book, but then, why quotesomeforty historical references to the subject?

Of the 244 pages in the book, only 128 are devoted to a discussion of the subject and from this figure must be deducted some 37 pages devoted to one table. The book can therefore be highly recommended to all those who want but a brief historical review.

IVOR SMITH

WORKSHOP IN PRINT

Metabolic Effects of Gonadal Hormones and Contraceptive Steroids

Edited by Hilton A. Salhanick, David M. Kipnis and Raymond L. Vande Wiele. (Based on a Workshop held in Boston, Massachusetts, December 1-5, 1968.) Pp. xxix + 762. (Plenum Press: New York and London, 1969.) \$27.50.

WHEN I read a book like this I wonder whether people are starting to forget that journals exist. This book is typical of many that are now appearing. It consists of papers delivered at a workshop conference, allegedly edited, though as almost all of the discussions on the papers are not included, the editing presumably consisted largely of selecting the sequence of the papers and writing the not very enlightening preface.

As a book, the volume is a very slow starter. The first twenty-nine pages are devoted to telling the reader several times that the contents are based on papers read at a Workshop meeting held in Boston, Massachusetts, December 1-5, 1968; a foreword, a preface, a contents, a list of participants, a list of observers, and an introductory note. None of this is of any great interest and it consequently comes as something of a surprise to read on page 731 that the editors selected only very brief sections of discussion to include on the grounds of economy of space.

The great bulk of the book consists of fifty-two papers that the editors have (somewhat arbitrarily) divided into the following sections: liver and gastrointestinal tracts (eight papers), carbohydrate metabolism (six), lipid metabolism (six), protein and amino-acid metabolism (six), respiration (two), hypertension and electrolytes (seven), calcium and skeleton (five), vascular system (seven), central nervous system (five). The papers are a mixture of studies with oral contraceptives, and with individual sex hormones, both natural and synthetic. In my opinion, it would have been better to have separated these two topics and produced two volumes, one on the metabolic effects of oral contraceptives and the other on sex hormones.

Both the standard of presentation and type of content of the various papers vary enormously. Some are written in the traditional journal style and present the results of original experiments, others recapitulate or enlarge on data published elsewhere. Still others are reviews of the literature. There is a quite considerable overlap of data between certain chapters. This would be unimportant if the papers were in a journal, but should have been edited out of the book. Many of the individual chapters, considered in isolation, are excellent. There is, for example, a good review by D. P. Rose of hormone effects on tryptophan metabolism, while R. H. Furman has ably presented the extremely complex problem of steroid effects on serum lipids. The inclusion of some papers in this volume seems rather curious. There are papers by R. Doll and M. Vessey and by D. G. Seigel and R. E. Markush on the epidemiology of vascular disorders. Both are good, interesting papers, but are not studies on metabolic effects and should not have been published in this book.

The lay-out of the book is unusual and erratic. The type varies considerably and is that of standard typewriters so that the book looks more like a collection of manuscripts than a finished work. There is a subject index and a list of drugs cited in the text. In this list on page 741 the progestogen components of Norlestrin and Norlutate are wrongly given.

I think that the editors of this book have missed a wonderful opportunity. They could have put together a series of tightly edited papers from leading workers in this field to produce a much-needed volume. Instead, they have produced a sloppy, rambling book that is difficult to use and will soon be forgotten.

M. H. BRIGGS