Hormone Chemistry (second revised edition)

by W. R. Butt
Ellis Horwood Ltd; Chichester, 1975
xiv + 272 pages. £ 12.50

The author has made a brave attempt to cover this enormous field in a modestly sized volume. To quote the dust jacket, 'it covers in general the major mammalian hormones in respect of their nature, origin, extraction and purification, structure (including its relation to function, biological activity and assay, immunological properties and immunoassay. Details of the more important clinical applications are also included'. Unfortunately, or perhaps inevitably, the approach suffers from being too selective or too superficial and these twin flaws run throughout much of the book.

Apart from the first chapter which deals mainly with general aspects of isolation and structural analysis, each of the remaining nine chapters cover a single hormone or a related group under the headings listed above. In each case there is a major emphasis on the methods of extraction, structure and physico-chemical properties and the chief value of the book is in having these collected together in a volume of this size. However, there is an abundance of what are surely trivial facts which could have been left to the handbooks of chemical data. Redolent of the Merck Index, thyrotrophin-releasing hormone is described thus: 'when freeze-dried it is a colourless, slightly hygroscopic powder, very soluble in water and methanol'. So much for one of the most fascinating substances produced by the central nervous system and which has been shown to have a number of direct effects on brain function and behaviour – although those are not mentioned in this book. There is a great deal of detailed information wh can only be of interest, or even comprehensible, to th with a substantial knowledge of chemical techniques. Unlike larger volumes on hormone chemistry however there is not sufficient detail to provide working meth for procedure, or even a best choice between the methods which are referred to.

The coverage of biological and clinical aspects is variable. There are some excellent sections on the relationships between structure and biological activity It would have been good to see a greater emphasis on the biochemical problems of synthesis, storage, releas and mechanisms of action where the information is stinted and occasionally wrong. Thus it is claimed tha the 'methyl xanthines such as caffeine and theophylli . . .cleave the ring phosphate of c-AMP to form 5-AM This will come as a surprise to many who have been u these compounds to enhance c-AMP-dependent processes!

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