CHEMICAL DIAGNOSIS OF DISEASE

Edited by:

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Preface

Some four years ago, the Editors canvassed opinion in several countries as to the need for an authoritative book on the interpretative aspects of clinical chemistry tests. It was felt that several detailed volumes on methodology were available, but similar depth of coverage of interpretation was incomplete or somewhat dated. All the individuals who were approached agreed on the value of an endeavour to gather together comprehensive surveys by authorities in all branches of the subject.

In seeking potential authors, we asked both physicians who were often faced with the problem of differential diagnosis of diseases and laboratory scientists who were commonly presented with isolated abnormal test values, to discuss the choice of tests and the interpretation of results from their different perspectives. Inevitably, this led to a certain measure of overlap, yet we felt that a dual approach was essential to provide adequate coverage of many different topics. We are grateful to the authors for minimizing duplication, but yet at the same time achieving thorough coverage of their own subjects. Strong efforts have been made not to overlook topics of actual or potential importance, but we would be grateful if readers could draw our attention to areas which they feel have been inadequately covered.

So far as possible, the material of each chapter has been organized in a uniformly systematic way, but the authors have been encouraged to adopt their own individual styles within this framework. Many of the chapters, and in some instances subsections of chapters, have been the subject of distinct monographs; and it has been essential to be highly selective. Undoubtedly on occasion the selection has been biased by the particular interests of the editors or the author concerned. However, a general attempt has been made to concentrate on the areas of major clinical importance; details of methodology have only been incorporated when they have an immediate bearing on the clinical interpretation of results. On matters over which there is still room for debate, authors have been aware in many instances of a need to cut corners by the use of dogmatic statements. This has been necessary to avoid a review format which attempts to mention all points of view and decide nothing.

Since the chapters have been written over a period during which moves towards the Système Internationale d'Unités have taken place, or are being considered in many countries, we have felt compelled to use both SI and traditional units throughout the book. An attempt has been made to implement many of the latest recommendations on nomenclature, and it is perhaps not surprising that problems have been encountered which may not have been appreciated by those making the recommendations.

In the past, it has sometimes been necessary to make clinical interpretations of results which were obtained by very dubious methodologies. Modern technology has rendered many of these interpretations obsolete and attention has been drawn to certain instances where the lack of specificity of an assay is likely to render the clinical interpretation of a result difficult or confusing.

It may be said by some that the title of the book should have incorporated the term "clinical chemistry", and indeed the book does concern a major aspect of this subject. Various definitions of clinical chemistry – or chemical pathology – have been proposed (IFCC Newsletters, Nos. 6–10, 1971–1974) which indicate three main divisions: analytical, fundamental research into the biochemistry of health and disease (in some countries termed clinical biochemistry), and the interpretation of results. It is this last – neglected – facet which is dealt with here. However, we hope that our readership will include both clinicians and laboratory scientists; the title of the book was chosen to emphasize that the interpretative role of clinical chemistry covers an area where clinicians and biochemists meet on common ground.

July 1979

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Chapter 1

Biological variability

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