are contributions on test-groupings to illuminate particular patient problems, on enzyme diagnosis of myocardial infarction, on problems of enzyme measurements, on pancreatic function tests, on laboratory profiling in disseminated intravascular coagulation, on monitoring heparin therapy, on assessing recovery from infective hepatitis, on trend analysis, on subject-specific reference ranges, on detecting vitamin B deficiencies by red-cell-enzyme-activation tests, on evaluating methods for measuring aspartate transaminase activity, on evaluating materials and methods for coagulation testing, on regional quality control programmes, on the latest state of computerisation in the Youngston Hospital laboratory, and on the role of the professions, government agencies, and industry in fostering standardisation. The contributions are of variable standard, contain little new material, and cannot be regarded as comprehensive reviews.

This is not a book that the clinical pathologist will want to purchase, but parts could be read with profit by candidates for the final MRCPPath examinations in Chemical Pathology or Haematology or the MCB.

F. V. FLYNN

Automated Immunoanalysis. Part 2. Clinical and Biochemical Analysis. Volume 7. Edited by R. F. Ritchie. (Pp. xiii + 304; illustrated; \$29.75.) New York: Marcel Dekker. 1978.

Quantitative immunochemical analysis has already made an impact on the clinical laboratory, but its potential for further exploitation has led to the development of many new approaches. In this book 19 leaders in this field record their experiences with some of the newest devices; the emphasis is on methods of improving and automating immunonephelometry and radioimmunoassays, but a contribution on automatic haemagglutination is included. Enzyme- and fluorochrome- labelled immunoassay is not covered. All of the contributions are of a high standard and very readable.

This book is recommended as providing a ready means for the chemical pathologist or clinical biochemist to bring himself up to date on light-scattering techniques, which seem destined to become a major growth area of the laboratory. It could also prove invaluable to the trainee preparing for the Final MRCPPath Examination in Chemical Pathology or the MCB.

The publishers are to be congratulated on producing so timely a publication.

F. V. FLYNN

Systemic Pathology. 2nd edition, Volume 3. 'Alimentary System'. By 38 authors. Edited by W. St. C. Symmers. (Pp. viii + 448 + Index Pp. 59; illustrated; £29.50.) Edinburgh, London, New York: Churchill Livingstone. 1978.

Twelve years ago, at the time of the first edition, there were few systematic special pathology textbooks. 'Payling Wright and Symmers' was as gratefully accepted by the senior registrar working for final Membership as by the histopathologist faced with an unusual specimen. Now things are different, and it is often difficult to know to which to refer or which to buy. Volume 3 of the second edition has competitors, with others in the pipeline, and it cannot deal with the whole of the alimentary system, including liver and pancreas, in as much detail as more specialised works. But the facts are there and many of the short sections are beautiful cameos. There are good illustrations and bibliography, though the gap between the completion of the text and publication has meant that, with occasional exceptions, there are few references to papers of the middle seventies. Major works like this represent enormous scholarship and time, but we have to obtain our recent references at source.

Systemic Pathology, now well on the way towards completion of publication, is a goldmine of traceable, readable information that reflects its very careful editing. The only difficulty will be to find the volume you want, because someone is sure to be using it somewhere in the laboratory.

R. A. B. DRURY

Methods in Cancer Research. Volume XV. Edited by Harris Busch. (Pp. xix + 445; illustrated; \$43.00.) Academic Press: New York. 1978.

Five of the seven chapters of this book are concerned with viral oncology and other molecular biological topics. In the first, recently developed methods for characterising the translation products of certain RNA viruses are reviewed, and in the second are described the techniques now available for determining whether DNA viruses are implicated in the aetiology of human cancers. tRNA methyltransferases are enzymes which

modify preformed tRNA by the transfer of methyl groups from S-adenosyl-methionine to specific positions in the tRNA molecule. Recent research on them is reviewed in Chapter 3. Chapter 4 ranges over the broad topic of biochemical phenomena associated with the ionising irradiation of cells, and Chapter 5 describes methods for the isolation of immune RNA and RNA fractions utilised in transferring both tumour and non-tumour sensitivity, and methods to assay for transfer of cell-mediated immunity.

The book ends with reviews of antigens in human breast cancer and of factors that need to be considered in experimental studies of metastasis.

This is a substantial volume in a highly technical, well-produced, and well-edited series.

F. J. C. ROE

Scientific Foundations of Clinical Biochemistry. Volume 1. Analytical Aspects. Edited by D. L. Williams, R. F. Nunn, and V. Marks. (Pp. 490; illustrated; £25.00.) London: Heinemann Medical Books. 1978.

Most of the longer works devoted to clinical biochemistry published in English are devoted largely either to the assessment of biochemical technology or to the evaluation of disturbed biochemical processes in patients. This work is divided into two volumes. The first (reviewed here) is concerned with the basic processes of biochemical analysis, and the second with the interpretation of the data produced.

This volume is the product of the MSc course in clinical biochemistry given at the University of Surrey and has the advantages of clarity of exposition and directness of a book based on a lecture course, but at times this gives way to the occasional looseness of expression unexpected outside the lecture theatre.

The authors of each section review, in a short and readable form, the basic principles of each type of chemical technology in clinical use (for example, analytical atomic spectroscopy, radioimmunoassay, thin-layer chromatography), discuss their uses and problems but do not, in contrast with other works, present suggested methods of analysis in detail which can occupy considerable space, often with little gain to the reader.

Mathematical techniques are not neglected; there are short discussions of 'normal'

ranges and quality control in a general section on the assessment of results.

The material presented is of a high standard and will be of particular value to postgraduates studying for higher specialist qualifications in chemical pathology, particularly those who do not have access to formal courses of instruction of this type. No doubt other more senior colleagues will wish to refresh their memory when reviewing the existing methodology in their laboratories or undertaking work in new fields.

There is no doubt that this volume does represent good value for money as the material presented is not easily found within one cover. Nevertheless one would prefer not to have replication of some subjects such as quality control under different headings. It is hoped that this book will be bought for all libraries in hospitals that train biochemists and senior registrars in chemical pathology.

M. G. RINSLER

Handbook on Hospital-associated Infections. Volume 1. 'Occurrence, Diagnosis, and Sources of Hospital-Associated Infections.' Edited by Willson J. Fahlberg and Dieter Groschel. (Pp. x + 138; Sfr 45.00.) New York and Basel: Marcel Dekker. 1978.

The press release accompanying the review copy of this book explains that it is the first of a 10-volume series that will deal with various aspects of hospital-associated infection. The next three volumes, already in preparation, will be *The Mode of Spread of Hospital-associated Infections*, *Problems in the General Hospital Population and Specific Measures of Control*, and *Hospital-associated Infections in the Compromised Host*. The International Advisory Board for the series comprises three members, including the series editor, from the USA and one each from Chile, Japan, Sweden, UK, and USSR. This first volume is intended to be '... useful to students and professionals in all phases of health care, including individuals in service departments (such as central services, housekeeping, dietary, and laundry), undergraduate and graduate nurses, medical students and residents, members of the medical staff, laboratory staff, and hospital administrators and board members—a formidable task.

The first chapter is a brief but excellent review of hospital infection from ancient times to the present; but Semmelweis is mentioned only incidentally and Colebrook not at all. The other four

chapters, too, are first class but their contents do not correspond very closely with their titles: thus, chapter 2 (clinical recognition) includes much discussion of incidence, causes, control, and treatment; in chapter 3 (laboratory diagnosis) the series editor sticks to his brief, but chapter 4 (therapy) includes material on predisposing conditions and diagnosis, while the author of chapter 5 (sources) also discusses incidence and control. The misplaced material is excellent in itself but will not be easily located by the enquirer because much of it is not indexed.

In the chapter on laboratory diagnosis, the importance of quality control is rightly stressed. There are six tables indicating the tests that should be available for different types of clinical work; they are more likely to be useful to the general pathologist than to the one-subject specialist. Many if not most bacteriologists would not agree with the indication that, for the investigation of wound infections, anaerobic culture is 'desirable' rather than 'essential'. In the discussion on the prophylactic use of antibiotics two possibly valid examples are given, but the mandatory use of penicillin to prevent gas gangrene after operations on the thigh is not mentioned; and there is no mention of the treatment of anaerobic infections with metronidazole.

Of the 83 references to other literature, all but three are to American sources; it is to be hoped that the international advisory panel will encourage a more international content in the later volumes of the series.

R. BLOWERS

Renal Pathology in Biopsy. By H. U. Zollinger and M. J. Mihatsch. (Pp. xiii + 684; illustrated; \$85.00.) Berlin, Heidelberg, New York: Springer-Verlag. 1978. This is an English edition of a Swiss-German work, and E. Castagnoli is to be congratulated on the elegant translation. The book represents a detailed personal record of 20 years' experience in examination of renal biopsies combined with an exhaustive critical review of the literature up to 1978. The first 12 chapters deal with technique and with the general pathological changes that may occur in different parts of the nephron. The remaining 18 chapters are concerned with a detailed description of specific renal diseases, including neoplastic, metabolic, and vascular disorders as well as the various forms of glomerulonephritis. Immunopathological and ultrastructural features

are recorded in detail, and the illustrations are of exceptionally high quality. Considerable attention is paid to pathogenesis and clinicopathological correlation. The authors have produced a magnificent piece of scholarship which will prove a valuable reference volume for all interested in renal disease.

M. S. DUNNILL

Automated Immunoanalysis. Part 1. Volume 7. 'Clinical and Biochemical Analysis'. Edited by R. F. Ritchie. (Pp. xii + 333; illustrated; \$34.50.) New York and Basel: Marcel Dekker. 1978.

This book is the first of two volumes devoted to the application of automation to the immunochemical measurement of antigens. Nephelometry alone is covered in this volume, the second volume considering radioimmunoassay and haemagglutination.

The first chapter describes the optical and mathematical background to light scattering in detail and with clarity. The application of instrumentation to light scattering measurement is discussed though we must await the next volume for a detailed consideration of the new generation of discrete nephelometers. Dr. Ritchie then goes on to describe, with his usual attention to detail, the automated precipitin analysis he has pioneered over the last few years. The effects of polymers on enhancing immunochemical reactions are well described in an important chapter containing a wealth of very useful information for workers using immuno-precipitin methodology. Chapters cover the kinetics of the immunoprecipitin reaction, a comparison of the various immunochemical methods currently in use, and the important topic of reference materials for protein analysis. A number of proteins are then singled out for particular attention: albumin with a discussion of clinical value and analytical problems, immunoglobulins with an excessively detailed description of measurement by automated immuno-precipitation, IgA with the emphasis on screening for genetic deficiency, and IgM with a useful highlighting of the particular problems in analysing this protein. Transferrin is covered in more detail than may be merited by a protein of relatively little clinical interest. Low-density lipoprotein measurement and the investigation of fibrinogen degradation products are discussed. These topics are of importance as they represent attempts to monitor more complex protein systems. The possibilities