Book reviews

Atlas of Cerebrospinal Fluid Cells. By H. W. Kölmel. (Pp. 124; illustrated; DM98, \$40.20.) Berlin, Heidelberg, New York: Springer-Verlag. 1976.

This book contains many excellent photographs but the text is by no means of the same standard. Translation from German has introduced some unintentional neologisms and some inaccuracies in the use of English words. For example, 'bacteriophage' is used as an alternative to 'phagocyte', instead of to describe a virus which attacks bacteria.

In the main the author's intention is not obscured, but a much more serious defect is the quality of the information. An illustration of this can be taken from the brief section on leukaemic infiltration of the central nervous system, which contains statements like 'Myeloid characteristics such as Auer bodies . . . are usually absent in acute lymphoblastic leukaemias'.

A number of readily detectable errors regarding leukaemic infiltration, about which considerable experience has been accumulated in recent years, casts some doubt on the reliability of the sections on rarer or less familiar cytological problems.

This is a great pity since it is possible that valuable experience of primary CNS tumours—for which an atlas would be welcome—will thereby be ignored.

BERYL JAMESON

Multiplication and Division in Mammalian Cells. (Biochemistry of Disease Series, Volume 6.) By Renato Baserga. (Pp. xii + 239; illustrated; SFr. 78.00.) New York and Basel: Marcel Dekker. 1976.

The observational art and science of morbid anatomy may seem to many of its practitioners a long way from the world of molecular biology, though clinical chemists may fall under its shadow. For this book Baserga acts as a guide taking biologists and pathologists on a tour of the hypotheses and evidence about the control of cells.

The author is gifted with a style of writing that is clear, logical, and a pleasure to read. He builds on things familiar to help to explain matters that extend to the boundaries of current knowledge. No doubt much of his material will find its way into undergraduate and postgraduate teaching courses. The book reviews biochemistry of the cell cycle, activation of genes, the role of chromosomal proteins,

and the way post-transcriptional controls may modify the function of cells. In its closing chapters the theme is distilled and applied to the triad of hyperplasia, hypertrophy, and cancer upon which much of histopathology is based.

This is a gem of a book that will be a source of joy and enlightenment to all those who wish to learn more about how the mysteries of cell behaviour are being revealed by contemporary science.

E. H. COOPER

The Principles and Practice of Diagnostic Enzymology. By J. Henry Wilkinson. (Pp. xvi + 592; illustrated; £17.50.) London: Edward Arnold. 1976.

It is 14 years since Professor Wilkinson's *Introduction to Diagnostic Enzymology* and six years since his *Isoenzymes* were published. Because of the absence of a satisfactory, up-to-date substitute this book has been awaited eagerly. It has not let us down.

The book is divided into two parts. In Part I the author outlines the essentials of elementary enzymology and follows this discussion with chapters on the chemistry of individual enzymes and the clinical importance of their assay. There is a short discussion of the principles of methods of estimation and of some of the problems of their standardization and quality control. Part II is multi-author and mainly deals with the use of enzyme assays in investigating disease of individual organ systems. Most of the authors, while being fairly comprehensive, help the general reader by making a critical selection of useful tests: particularly good in this respect are the chapters by Dr Rosalki on diseases of skeletal muscle and of liver.

Criticisms are minor and few. Dr Moss, in a good chapter on bone disease, quotes phosphatase activities in King-Armstrong units only and, despite his own warnings, Professor Wilkinson occasionally gives International Units without stating the temperature of the reaction: mostly he follows the safer practice of giving multiples of the upper 'normal' limit. The chapter on congenital enzyme abnormalities by Raine and Westwood is, inevitably, little more than a list: such a huge subject cannot be adequately covered in the space, and it might have been wiser to keep the useful bibliography but to deal in greater depth with such selected topics as Professor Ryman's chapter on glycogen storage disease.

The most important criticism of this

book is the price, over which authors have little control. As Bernard Levin said, 'the economics of publishing is like the peace of God in that it passeth all understanding'. However, because this book is a must for all trainee and trained chemical pathologists and for most clinicians, every departmental or hospital library should have at least one copy; the rich should buy a copy for themselves.

JOAN F. ZILVA

Clinical and Biochemical Aspects of Lactic Acidosis. By Robert D. Cohen and H. Frank Woods. (Pp. xii + 276; illustrated; £10.50.) Oxford, London, Edinburgh, Melbourne: Blackwell Scientific Publications. 1976.

Lactic acidosis is being increasingly recognized since its elucidation by Huckabee 15 years ago. In this excellent monograph, a physician and a pharmacologist survey current knowledge and their own experience of the biochemistry and clinical features.

They classify as type A the traditional variety, due to hypoxia and lack of tissue perfusion. The main theme is type B, lactic acidosis of other origins, which is considered fully with an analysis of published causes. These are divided into

- (1) diabetes, liver disease, and other serious diseases
- (2) phenformin, fructose, and other drugs
- (3) hereditary.

The authors present a detailed study of the theories of overproduction and of underutilization in causing type B lactic acidosis and are critical of many claims made for miscellaneous drugs.

The book is necessary reading for all chemical pathologists and will be a useful purchase for those with clinical responsibilities. It is well produced with few errors of terminology.

D. N. BARON

Infection and Immunology in the Rheumatic Diseases. Edited by D. C. Dumonde. (Pp. xxvi + 692; illustrated; £33.50.) Oxford, London, Edinburgh, Melbourne: Blackwell Scientific Publications. 1976.

This book is made up of short articles based on papers given at an international symposium held on the title subject in March 1974 and organized jointly by the World Health Organisation and the Arthritis and Rheumatism Council. The main attraction of this book is to bring

together within one cover a very wide range of ideas and concepts in the investigation of rheumatic diseases. It will be a useful starting point for those wishing to probe restricted aspects of these diseases in more depth. However, most articles in themselves do not give sufficient information to allow critical evaluation of the results which are given. Inevitably, a book of this type rapidly becomes out of date, and one cannot avoid commenting on the delay in publication of these proceedings. Over two years elapsed between the meeting and publication, and although the cover flap says that the contributions have been written and revised so as to ensure the book is up to date, the extremely sparse scattering of 1975 references qualifies one's interpretation of this statement.

It is useful to compare this publication with that of the 2nd World Congress in Immunology, which was held in August 1974 and published as author-prepared manuscripts and workshop reports by offset lithography in five volumes totalling over 2000 pages in November 1974.

This was largely made possible by the congress editors making it clear from the outset that manuscripts would be required at the conference and by a very energetic editorial office.

The aesthetic quality of this beautifully produced book does not really compensate for the delay in its production.

I. C. M. MACLENNAN

Chromatographic and Electrophoretic Techniques, 4th edition. Edited by I. Smith. (Pp. ix + 485; illustrated; £9.00.) London: William Heinemann Medical Books. 1976.

It is not often that a book lives up to the claims it makes for itself. In the preface of the present book three claims are made: 'to bring together in as concise a form as possible tried and tested methods of zone electrophoresis; to discuss all those methods which can be applied routinely; and to provide all the essential information to enable the reader to apply these techniques immediately and without recourse to the literature for further details'.

It is a distinct satisfaction to be able to confirm that all three claims are fully justified. In fact, the claims are modest, for they fail to make clear the eminent readability of the book and the wide-ranging scope of the techniques covered, each in an authoritative chapter of its own. After Ivor Smith's introductory chapter on general principles of zone electrophoresis, the

technology begins with paper electrophoresis (at both low and high voltages) and progresses to preparative acrylamide disc electrophoresis, taking in along the way such methods as thin layer, cellulose acetate, agar and starch gel electrophoresis; isoelectric focusing; and quantitative immunoelectrophoresis.

Nor does the book cover methodology alone. There are chapters on specific applications of the techniques; separation and visualization of enzymes in gels, electrophoresis of proteins and RNA on polyacrylamide and agarose gels, and models for macromolecules, nucleic acid, and proteins.

The fact that the book is now in its 4th edition speaks for itself. And at £9.00 it is modestly priced as book prices go today. A buy for those who want the latest on zone electrophoresis in all its aspects.

G. FEINBERG

Quality Control in Haematology. Symposium of the International Committee for Standardization in Haematology. Edited by S. M. Lewis and J. F. Coster. (Pp. xii + 237; illustrated; £7.50; \$19.50.) London, New York, San Francisco: Academic Press. 1975.

This book consists of 17 chapters based on work presented at the symposium organized by the International Committee for Standards in Haematology and presented at the Congress of the International Society of Haematology in Jerusalem in September 1974.

Each chapter covers a different aspect of quality control dealing with all aspects. The book is comprehensive, covering all points from specimen collection to a final chapter on the cost of quality control. Other chapters deal with the principles of total quality control. More detailed methods are contained in a chapter on a statistical approach to quality control. There is a most informative chapter on the purification, standardization, and quality control of Romanowsky dyes. Standards and reference preparations for haematological measurements are also discussed, including not only preparations for haemoglobin and the various blood cells but also for serum iron and anticoagulant control. It is inevitable in a book of this type that it is principles and methods which are dealt with and not specific products such as the various kits, for example, for red cell enzyme preparations which are marketed commercially and are widely used. Each chapter gives a number of

references and there is a subject index. Although there is little new work, it is most useful to have such information all in one book.

J. W. STEWART

Human Blood Coagulation, Haemostasis and Thrombosis, 2nd edition. Edited by Rosemary Biggs. (Pp. xxviii + 769; illustrated; £15.00.) Oxford, London, Edinburgh, Melbourne: Blackwell Scientific Publications. 1976.

This volume contains an encyclopaedic account of the views and practice of the Oxford Haemophilia Centre and of a number of distinguished associates over a wide field of normal and abnormal haemostasis. It goes without saying that the book contains much information of interest and great value, but the distinguished editor points out that major advances of 1974 and 1975 are unrepresented, due to an unfortunate delay in publication.

The book very properly begins and ends with chapters by the doyen, Professor R. G. Macfarlane, FRS, summarizing the history of the subject and of the book (successive editions of 'Macfarlane and Biggs' and the previous edition of this work), and discussing the mechanism of haemostasis in the whole organism, with an intriguing cameo on the evolution of coagulants and anticoagulants in the prey-predator relationship. Esnouf deals with fibrinogen, thrombin, and the extrinsic activation of prothrombin. Biggs takes the intrinsic pathway, and the interaction of the intrinsic and extrinsic systems. Nossel reviews the contact system (XII, XI, and Fletcher factor) with interesting sections on the apparent clinical irrelevance of XII deficiency and on thrombosis. Biggs and Denson include a useful account of anti-thrombins in their chapter on natural and pathological inhibitors of coagulation, their suggestion to drop the term 'circulating anticoagulant' should be widely heeded. Born and Hardisty describe normal and abnormal platelet function, respectively, with helpful tabulations of thrombocytopenia and of acute and acquired platelet disorders. In a chapter on abnormal clotting factors, Denson brings immunological tests into clear perspective. Rizza describes the clinical features of clotting factor deficiencies. Bidwell and her associates discuss the preparation of therapeutic blood products, giving comparative flow charts for different preparative methods; blood-protein biophysicists