down explicitly what the students are expected to know. This book has developed from the teaching of renal pathophysiology to Harvard medical students. The book covers the normal physiological and biochemical aspects of renal function, pharmacotherapeutics, and the clinical, biochemical, and histological aspects of acute and chronic renal disease. As the authors state in their introduction, the aim of this book is that it should be an introduction to the subject area, and the reader seeking further knowledge is provided with ample references to both original articles and reviews. This is in all respects a most excellent book that undoubtedly should find a place not only in the teaching of medical students but also on the reading lists of those medical graduates preparing for higher degrees who need a solid foundation on which to build.

M. R. MILLS

Microbiological Aspects of Food Hygiene. Report of a WHO Expert Committee with the Participation of FAO. Technical Report Series No. 598. (Pp. 103; £2.52.) Geneva: WHO. 1976.

This report reflects an increasing awareness of microbiological hazards related to the consumption of contaminated food. The first part consists of short sections on the bacteria, viruses, fungi, and parasites which may give rise to food-borne disease. Each section summarises the epidemiology, pathogenesis, and laboratory investigation of disease caused by these agents. In the second part the way in which food is handled is related to its microbiological hazard. The interplay of processing, storage, food habits, and international travel is described. The place of monitoring, microbiological standards, and the best use of laboratory resources are discussed. In its recommendations the Committee stresses the need for international collaboration and research to produce information on which advice and control measures can be based.

This book is useful because it takes a broad look at the problems of food hygiene and for its references. (There are more than 200 of these, nearly half of them to publications after 1973.) Those who lecture on this topic will find it most valuable.

JOAN R. DAVIES

Phagocytic Engulfment and Cell Adhesiveness as Cellular Surface Phenomena. Edited by Carel J. van Oss, Cetewayo F. Gillman, and A. Wilhelm Neumann. (Pp. 176; illustrated; \$19.50.) New York and Basel: Marcel Dekker. 1975.

It has long been realised that interfacial energies play an important role in the engulfment of bacteria, and Stuart Mudd, to whom this volume is dedicated, first showed that the hydrophobicity of bacteria correlates well with their susceptibility to phagocytosis. The authors critically examine the hypothesis that phagocytosis occurs primarily because of differences in the surface free energies of phagocyte and particle. The interfacial tensions have been measured by adaptation of the contact angle method, first developed by Thomas Young in London in 1855. Using this simple apparatus, the authors have investigated the role in phagocytosis of aspecific plasma factors, antibiotics, viruses, and antibodies. One of many intriguing findings is that the interfacial free energy of the Fc tail of the IgG molecule can be ascertained. Study of thermal energy requirements predicts that complexes of IgG with antigen require at least three immunoglobulin molecules before phagocytosis can occur whereas only one molecule of IgM is necessary. Lipid droplets such as triolein cause a decrease in the contact angle of phagocytes and thus enhance their phagocytic activity. These are but a few examples of the usefulness of the contact angle in interpreting a wide range of bacteriological and immunological phenomena. This book is lucid and original in outlook; it is commended to bacteriologists and immunologists everywhere.

A. E. STUART

Cytogenetic Aspects of Malignant Transformation. By N. B. Atkin, *Experimental Biology and Medicine*. Monographs on Interdisciplinary Topics, Vol. 6. (Pp. viii + 171; illustrated; SFr/DM 74.) Basel: Karger. 1976.

Dr Atkin and his colleagues have made a considerable contribution to our knowledge of the cytogenetics of neoplasia. This neat book is a comprehensive catalogue of information available on the karyotypes, of premalignant and malignant cells, described before the banding techniques that have led to a considerable refinement in chromosomal analysis were introduced. The text is factual rather

than philosophical, but a glimpse of Dr Atkin's view of the importance of chromosomal abnormalities in relation to neoplasia is given in the main conclusions when he writes 'The data at present strongly suggest that damage caused by oncogenic agents at certain localized chromosomal sites is directly related to the acquisition of neoplastic properties; this damage frequently being manifested in the form of the chromosome abnormalities seen in the neoplastic cells.' This would indeed be a good starting point for an evaluation of the cytogenetic aspects of the problem of neoplasia.

SYLVA D. LAWLEY

Histology, 3rd edition. By C. Rolan Leeson and Thomas S. Leeson. (Pp. ix + 605; illustrated); \$9.75.) Philadelphia, London, Toronto: W. B. Saunders. 1976.

This work is extremely comprehensive and the components of the anatomical systems are dealt with in great detail. The intention of the authors was to combine an atlas of histopathology together with a textbook.

This third edition has been considerably expanded, the latter taking the form of an increase in the number of illustrations rather than in the text which for the most part, is refreshingly clear and succinct. The illustrations are generally of a high standard, and the inclusion also of electron micrographs and a number of scanning electron micrographs adds considerably to the value of the relevant sections. There is a detailed chapter on the micro anatomy of the cell and each chapter has a comprehensive bibliography.

This book will be of value to undergraduate graduates, although there is much in which is too advanced for their needs, but it may stimulate those who seek to extend the range of their knowledge. It will also be of great value to teachers of histology and be helpful to the working histopathologist.

G. B. D. SCOTT

Medicolegal Investigation of Gunshot Wounds. By Abdullah Fatteh. (Pp. xv + 272; illustrated; £14.80.) Philadelphia, Toronto: J. B. Lippincott Company. 1976.

The author has attempted to deal with the police and the scientific and pathological investigation of firearm wounds in this relatively short book, which also

includes a comparison of the necropsies which followed the assassination of Abraham Lincoln, John F. Kennedy, and Robert F. Kennedy, and a note on current research.

In a book of this length it is not possible to deal in depth with the many aspects of such an investigation. The most authoritative chapters are those dealing with actual wounds, and these reflect the author's great experience in this field. The difficulties which may arise during the pathological examination of wounds, and their interpretation, provide a salutary message to pathologists who believe that the patterns of firearm injury follow established rules. The weakest section is that on ballistics, most of which could be omitted as it is out of context.

This book describes unusual cases which might be of interest to the forensic pathologist but has little to offer which is not already included in standard textbooks on forensic medicine.

A. K. MANT

The Hyperlipidaemias: Clinical and Laboratory Practice. By Barry Lewis. (Pp. xii + 436; illustrated; £16.00.) Oxford: Blackwell Scientific Publications. 1976.

The hyperlipidaemias are now recognised as one of the commonest metabolic disorders affecting industrialised nations and have been a subject of special interest to Professor Lewis for the past two decades during which time he has become a recognised international authority. This book represents the distillation of his experience and satisfies a long awaited need for a comprehensive, readable, and authoritative text on this important area of medical practice. The early chapters briefly but adequately review basic lipid and lipoprotein chemistry and metabolism, and later chapters discuss physiological factors affecting plasma lipids before each of the major disorders of lipid metabolism is discussed in individual chapters relating to each disorder. The final chapters are devoted to discussion of management problems including the author's briefly stated views on the function of a lipid clinic.

The final two chapters on laboratory practice and comments on sample collection and methodology make this a valuable text for departments of clinical chemistry as well as physicians with direct responsibility for the clinical care of patients with problems of lipid metabolism. The book is well illustrated, and

one of its notable features is that each chapter can be read as an individual essay without too much cross reference to other chapters. Professor Lewis and his publishers are to be congratulated on producing a most worthwhile addition to the medical literature.

C. A. PENNOCK

Biology and Disease of the Hair. Consulting editors: Tatsuki Kohori and William Montagna. (Pp. xxxi + 667; illustrated; £45.50.) Baltimore, London, Tokyo: University Park Press. 1976.

This is a record of the proceedings of the First International Symposium on Biology and Diseases of the Hair held in Tokyo in 1975, provided we ignore the one in London in 1957 and that in Canberra in 1964. The majority of the 100 or more contributors are Japanese with a supporting number of American authorities on hair growth, melanogenesis, pilosebaceous activity, and others. There are also a small number from Poland, West Germany, and Australia. The book contains 52 chapters and has six editors.

The work deals with the physiology and pathology of hair growth, diseases of the hair and their treatment, and hair cosmetics; there are also chapters on the comparative study of hair in mammals. This is, therefore, a comprehensive work on many facets, and is covered in a matter of 667 pages. This means that many aspects are only briefly considered: more so in view of the fact that many of the pages are filled with good quality transmission and scanning electron micrographs and other photographs. Many of the chapters have less than six pages of text and some of these might be considered irrelevant as, for example, those on Immunofluorescent findings in psoriasis of the scalp, and The histological study of keratoacanthoma. Some aspects of hair pathology are, however, neglected: thus, while there is a chapter on the Ultrastructural study of alopecia areata, another on the zinc treatment of this condition which incidentally reports the findings in only two cases, and a third on treatment by occipital nerve blockage, there is no 'in depth' consideration of the possible mechanisms causing this interesting condition.

Chapters deserving special mention include those on The molecular mechanisms in hair formation, The genetic control of mammalian hair color, and The genetic disorders of hair growth; the latter

includes a number of excellent scanning electron micrographs.

In brief, the book has too little text, but some of the chapters are good even though short. The work does provide a number of interesting essays on our present knowledge of hair and its disorders and should be of value to those involved in these fields. However, the price may deter some would-be readers as the cost is £45.50, and this does not include an index!

A. JARRETT

Pathology of Tumours of the Oral Tissues. 3rd edition. By R. B. Lucas. (Pp. x + 426; illustrated; £16.50.) Edinburgh, London, and New York: Churchill Livingstone. 1976.

Since the publication of its first edition in 1964, Professor Lucas' book on *Pathology of Tumours of the Oral Tissues* has become established as a standard text, and this new (3rd) edition will doubtless be as popular as its forerunners. There are nine chapters, dealing successively with the embryology and histology of oral tissues, the taxonomy of oral tumours, tumours of dental tissues, tumours of the jaws and soft tissues, metastatic tumours, salivary gland tumours, cysts of oral tissues, and dysplastic lesions of bone. The book is profusely illustrated with a large number of excellent photomicrographs, some radiographs, and photographs of gross specimens. The text is comprehensive but eminently readable. An adequate list of references is given at the end of each chapter. This work will be of great help and interest to the practising histopathologist, whether 'general' or specialising in oral pathology. It can also be recommended as a valuable reference work for all clinicians and radiologists concerned with the diagnosis and treatment of neoplastic disease of the head and neck.

N. F. C. GOWING

International Review of Experimental Pathology. Volume 16. July, 1976. Edited by G. W. Richter and M. A. Epstein. (Pp. xiv + 345; illustrated; £21.95/\$36.00.) New York: Academic Press. 1976.

This is a further interesting and valuable addition to a respected review series in experimental pathology. Each of the present topics has important clinical