had been inflated to midway between systolic and diastolic blood pressures. Total protein was estimated by the Technicon SMA 12/60 biuret method which had a within-batch coefficient of variation of 1.1%. ETR determinations (Mincey *et al.*, 1974) were performed in duplicate and had a within-batch coefficient of variation of 1.4%. The results are shown in the Figure.

Although venous stasis can increase serum total thyroxine concentration it has no significant effect on the ETR or on a free thyroxine index (Judd *et al.*, 1975) because these latter methods have a 'built-in' adjustment for changes in protein binding. It is reassuring to know that the avoidance of stasis when collecting blood although ideal, is not essential for an accurate ETR.

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Book reviews

Colour Atlas of Gynaecological Cytopathology. By Chandra Grubb. (Pp. 72; 318 figures; £15.00.) Aylesbury: HM + M Publications. 1977.

Dr Grubb has produced an eminently practical Atlas for cytologists in the field of gynaecology. With 318 colour illustrations she has had ample scope to take the trainee through the characteristics and pitfalls of diagnosis in her inimitable way, born of years of practice in one of the most successful training schools in the country. It is a pity that some of the plates seem to lack colour balance. The choice of some of her illustrations of severe dysplasia and invasive cancer seem to be closely similar and demand full histological confirmation, but this is probably the purpose of a full treatise on such a subject.

Her text is again characteristic of her teaching style and presents clear and definite criteria for malignancy and other changes which bring to the surface the weakness and confusions in cytology terminology. Many cytopathologists do not like to use the word 'malignant' as she does for a carcinoma in-situ cell, and still others (though not she) will no longer use the term 'dyskaryosis' to describe the nuclear changes of dysplasia and malignancy. I feel that there is an error in the definition of adenocanthoma in Figs 21.9 and 21.10 where such a tumour should by right not display malignant squamous cells. There is a great need for the English cytopathologists to establish a standardised nomenclature to which all could adhere. The classification of invasive squamous cancer used by Dr Grubb is particularly British and does not meet any of the international, WHO, IAC, or American viewpoints.

In all, the volume is an excellent addition to any cytologist's library and a most useful reference book for those needing to review the wide and confusing range of cytological change in disease.

O. A. N. HUSAIN

WHO Working Group on the Organization and Methodology of Cytology Laboratories (Moscow, 16-20 November 1976). (Copies of the final report will be available later from the World Health Organisation)

This meeting and its report relate to one of the periodic reviews by the WHO of areas of public health laboratory activity.

It accepts that cytology has proved its worth as both a cancer detection and diagnostic system, involving a wide range of organs and sampling methods, and its use in hormone assessment, infectious conditions, monitoring drugs, radiation and cytotoxic effects.

The organisation of cytology laboratories is given consideration, especially in relation to screening programmes, clinical diagnosis, research, and teaching, and laboratories are divided into the routine and academic types. Cytogenetics and other investigations, such as biomedical research and automation (for both data processing and cell scanning), may involve either type of laboratory, but the academic one would be responsible for teaching and fundamental research.

It is stated unequivocally that the cytology laboratory must be under the direction and control of a medically qualified pathologist and that training of the latter (as for a histopathologist) should be for not less than four years, with cytology included in the syllabus, or should be a 6-12 months' attachment to a laboratory cytology department after higher qualification. Similarly, the training of a technician should be well grounded in general technology and last at least three years, one year of which should be devoted to practical work.

Much of the primary data utilised by the conference has come from the three documents on the code of quality practice and the curricula for both cytopathologists and cytotechnologists prepared by the British Society for Clinical Cytology, even though none of these proposals has been put into practice in this country.

O. A. N. HUSAIN

Platelets in Biology and Pathology. Edited by J. L. Gordon. (Pp. xv + 389; illustrated; US \$53.95.) Amsterdam: North Holland Publishing Company. 1976.

This is the first volume of a new series 'Research Monographs on Cell and Tissue Physiology' and it sets a suitably high standard. It consists of 14 chapters by international experts and treats in great detail with platelet physiology which is fully related to that of other cells. It is well

ranging—membranes, receptors, the reactions with thrombin, biogenic amines, and prostaglandins etc. are all covered. It is not about haemostasis—the bleeding time, for example, is not mentioned, and thrombosis is dismissed in a couple of pages. There is some overlap between chapters, some facts about prostaglandins are repeated in three chapters. It is not inclusive, but it does not claim to be; yet I miss any reference to the effect of dietary lipids, surely an important and indeed useful area.

This book is for the new and indeed the old platelet research initiate who can now work in this virtually independent speciality remote from clinical applications. The editor hopes, and with reason, that workers in other fields may find the platelet a useful model and this a useful book. It is authoritative, well produced, and copiously illustrated but expensive even by 1977 standards.

J. R. O'BRIEN

Contributions to Nephrology, Volume 6. Renal Research. Clinical and Experimental Contributions from Japan. Edited by K. Kobayashi, K. Maeda, and K. Ohta. (Pp. vi + 152; 8 figures, 19 tables; DM 69, \$26.75.) Basel: Karger. 1977.

This continues the interesting series of Contributions to Pathology edited by Berlyne and Giovanetti. It is of value not only by virtue of the quality of the contributions but also because it provides a valuable insight into current progress in renal research in Japan.

It is not perhaps unexpected that the first paper concerns environmental cadmium pollution for such pollution is now, as Saito and his co-workers say, a major social and political problem in Japan. The gravity of this problem is perhaps best illustrated by a reported incidence of 13–22% of proteinuria and glycosuria in the population of cadmium polluted areas. This is ascribed to a cadmium-induced proximal tubular dysfunction.

The remaining papers centre on more familiar renal problems, many of them experimental. Kawamura and Negano confirm the already recognised disease in the sialic acid content of the glomerular basement membrane in diabetes mellitus and show that this change is referable to a change in the sialoglycoprotein itself.

Among other papers a rather unusual one centres on the isolation and analysis of

toxic substances from the urine of patients with uraemia, by the assessment of the effects of various urine fractions on tissue-cultured kidney and liver tissue. A particularly toxic fraction was characterised by methyl guanidine or one of its derivatives.

Wakashi and his colleagues amplify current work on the pathological significance of urinary glomerular basement membrane antigens; the paper's particular value lies in the great care that has been taken to separate such antigens from tubular basement membrane antigens.

The dexterity of Japanese workers is exemplified by a micropuncture study (Fujimoto *et al.*) on the proximal tubule of the bull-frog. This work confirmed that potassium was reabsorbed against an electrochemical gradient but showed the passive transport of chloride.

In a paper of wide interest to experimental pathologists, Shimizu and his co-workers review the occurrence of immunoglobulins and complement in the normal glomeruli of a wide range of mice. The presence of such deposits is by now fairly generally realised by those working on experimental nephritis in mice. The occurrence of complement and immunoglobulins in the glomeruli of normal animals suggests that one should be rather more reserved than is sometimes the case when ascribing a pathological significance to the presence of similar deposits in the human glomerulus.

J. C. SLOPER

Blood Transfusion for Clinicians. By John Wallace. Foreword by Sir Cyril A. Clarke. (Pp. ix + 351; £10.00.) Edinburgh: Churchill Livingstone. 1977.

The ever increasing developments in the field of blood transfusion, particularly in blood component therapy, have resulted in more and more clinicians requiring the services of a modern transfusion centre. There is therefore a need to inform clinicians of these recent developments, and Dr John Wallace is admirably placed to do this, not only because of his many years' experience in the Glasgow centre but also because of his own important contributions in this field.

Appropriately, blood component therapy is the first and major topic described. Other chapters cover blood group serology, particularly the Rh factor, complications of transfusion therapy,

including an authoritative account of the problems of hepatitis, and the HLA system and its value in transplantation and certain disease processes. He concludes with chapters on the organisation of the service and its possible future.

My only reservation is the style of presentation. There is a fair amount of repetition, and the continuous narrative style with few diagrams and tables, etc., may not be to everyone's taste. If one is looking for a specific piece of information it may be difficult to locate it. However, this form of presentation may well have been a factor in keeping the price a reasonable one. This book does fulfil a need and is a welcome account of the continually developing blood transfusion services available to sick patients today.

L. A. D. TOVEY

Methods of Protein Separation. Volume 2. Edited by Nicholas Catsimopoulos. (Pp. xviii + 326; illustrated; no price given.) New York and London: Plenum Press. 1976.

This volume contains detailed information available on up-to-date technology for the separation, identification, and characterisation of proteins based on gel filtration, gel electrophoresis, and adsorption chromatography. It deals essentially with theoretical considerations and contains valuable data regarding the principles underlying the various separation procedures. Technical data, however, are not omitted. The advantages and limitations of available techniques are well presented and could be considered as one of the main virtues of this book. The interpretation of separation patterns is another valuable characteristic of this volume.

A very useful chapter is devoted to estimation of molecular weight by gel filtration and gel electrophoresis. It comprises both the mathematical principles and the statistical considerations. Another is devoted to the very interesting sieving chromatography, a combination of gel filtration with adsorption chromatography which is particularly effective, for enzyme purification.

This is most certainly not a 'cookery' book and would be of greatest value to research laboratories, possibly less so to the routine chemical pathologist.

J. KOHN