Letters to the Editor

Lymphangiosarcoma

In *J. clin. Path.* (24, 524, 1971) you were kind enough to publish an article of mine entitled 'Lymphangiosarcoma arising in chronic congenital and idiopathic lymphoedema'. Through the courtesy of Miss Irene Cade I have recently received follow-up information on this patient.

He remained well for two years and four months. He then developed local skin recurrences, bilateral inguinal node involvement, and a mass in the pelvis. Later a metastasis developed in the neck and he died of his disease three years and two months after his hindquarter amputation.

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Estimation of Fibrinogen

We have read the paper by Drs Giddings and Bloom, in the July number of the Journal, with great interest. We were surprised, however, that they encountered no difficulty in using Ortho Fibrindex as their source of thrombin for the fibrinogen titre test. We have found this reagent unsatisfactory because of contamination by plasmin, as can be seen from the results of the following tests:

FIBRINOGEN TITRES
Using thrombin of different manufacture, on the same plasma:

Source of Thrombin	Fibrinogen Titre
Ortho batch 127	1/32 Lysing rapidly to 1/16
batch 128	1/32 Lysing rapidly to 1/16
Maw	1/128 No lysis
Parke Davis (P.D.)	1/128 No lysis

COMPARISON OF VARYING STRENGTHS OF ORTHO THROMBIN
On samples of the same plasma:

Units of Ortho Thrombin/ml (Batch 8H 133)	Fibrinogen Titre	Fibrinogen Titre with ϵ ACA
5	1/128	1/128
10	1/112	1/128
25	1/32	1/128
50	1/24	1/128
75	1/24	1/128
100	1/16	1/128

It will be noted that as the amount of thrombin increases the apparent titre falls, an effect abolished by epsilon amino-caproic acid.

TESTS FOR PLASMINOGEN AND PLASMIN ON FIBRIN PLATES
Thrombin, 1.6 units in a volume of 0.03 ml, was applied to fibrin plates and incubated for 18 hours.

Source of Thrombin	Digestion Zone (product of two diameters)
Unheated Fibrin Plate	
Maw	Nil
Parke Davis	Nil
Ortho batch 127	120 mm $\square$
batch 128	140 mm $\square$
Heated Fibrin Plate	
Maw	Nil
Parke Davis	Nil
Ortho batch 127	80 mm $\square$
batch 128	140 mm $\square$

Plasmin contamination of thrombin is an old observation (see Astrup and Darling, 1943) and these experiments show that Ortho thrombin from three separate batches contains significant amounts of this protease. Unless ϵ ACA is used in the test, the contaminant plasmin will cause sufficient proteolysis to give a falsely low fibrinogen titre. If ϵ ACA is used the intensity of fibrinolysis originating in the patient's plasma cannot be assessed. For the fibrinogen titre test it would therefore seem more sensible to use samples of thrombin proved to be free of plasmin.

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Reference
Astrup, T., and Darling, S. (1943). Contributions to the chemistry of prothrombin. *Acta physiol. scand.* 5, 97-102.

Book reviews

Laboratory Diagnosis of Liver Diseases
Edited by F. W. Sunderman and F. W. Sunderman, Jr. (Pp. xiii + 542; illustrated. £12.60.) St Louis, Missouri: Warren H. Green Inc. London: Adam Hilger Ltd. 1971.

Most symposia are valuable to the participants, but the volumes resulting from them generally fail to cover current knowledge in the field in either a well balanced or an integrated manner. This volume, which is the record of a seminar of the Association of Clinical Scientists held in Washington (? in 1966: pre-HAA), is no exception. There are more than 500 chapters of very varying length and quality, many on clinical chemistry methodology, others on biochemistry, clinical aspects, and general diagnostic procedures such as isotope scanning. To the reviewer (a biochemist) the histological chapters appear outstanding. There seems to be little original material, and many space-occupying lesions irrelevant to the main theme. There may well be a place for a book on this subject, and ruthless (> 50%) editorial pruning of these contributions could have been a start. The book costs £12.60 (price not given on the cover) and cannot be recommended.

D. N. BARON

Biochemical Values in Clinical Medicine, 4th ed. By R. D. Eastham. (Pp. iv + 196. £1.00.) Bristol: John Wright and Sons. 1971.

The fourth edition of this book contains much new material and has been extensively revised. SI units have been introduced.

There are some inexplicable omissions, such as tests of adrenal stimulation with synthetic polypeptides, whereas certain tests of adrenal inhibition are given. Two pages are devoted to the basal metabolic rate which must surely be rarely used today, but the discussion of the T_3 uptake test refers to methods which are not in common use.

Our clinical colleagues will no doubt be stimulated to ask for tests mentioned in this book. Laboratory workers can only

hope that they will come to discuss their problems in order to get advice on the relevance and availability of these tests.

B. W. MEADE

Hypogammaglobulinaemia in the United Kingdom. By the Medical Research Council Working Party on Hypogammaglobulinaemia. (Pp. xvi + 319; illustrated. £4.50.) London: H.M. Stationery Office. 1971.

This long awaited report surveys the findings in 176 patients with hypogammaglobulinaemia, admitted during 14 years to the MRC trial of γ -globulin treatment. It is therefore the largest single such trial ever recorded and while providing evidence that the higher dose regimen (0.05 g γ -globulin/kg/week) offers somewhat better treatment, it recommends that 0.025 g/kg should be tried initially, reserving the higher dosage for patients not responding adequately. These latter include some whom Freeman found did not show the reduction in catabolic rate (to $T_{1/2}$ 32 days or longer) expected in hypogammaglobulinaemia, although protein-losing enteropathy, etc, was not excluded.

The incidence of patients presenting at all ages and in both sexes with serum IgG levels under 200 mg/100 ml is estimated at 4 per million of the UK population with an excess of males under 10 years of age raising the male prevalence to 15 per million. The family studies, clinical details (including rheumatism), and histopathology findings are clearly recorded, as are the preparations for immunoglobulin concentrates with notes of reactions to the treatment, whereby there was only one death throughout the trial. The value of immunoglobulin estimations is given, and the measurement of isohaemagglutinins is shown to be very useful both as a parameter of the quality of IgM (meningitis only occurred with titres <1) and as a criterion of an immune deficiency state. Resting levels of other antibodies yielded useful statistics proving the value of replacement therapy, but from the ranges given (only detectable in 5% to, at best, 90% of normals) are obviously useless in decisions affecting individual patients.

The teamwork of the working party is to be congratulated in providing a hoard of useful information and in creating a national interest and service for immune deficiency states. The original trial criteria have been superseded by later experience and as the authors admit 'many oppor-

tunities for observation were lost', the heterogeneity of immune deficiency states becoming all too clear. Nevertheless this volume will long serve for useful reference and for establishing the current practice of γ -globulin treatment.

J. R. HOBBS

New Aspects of the Structure, Function, and Synthesis of Hemoglobins. By T. H. J. Huisman and W. A. Schroeder (Chemical Rubber Co. (CRC) Monoscience Series). (Pp. 64; illustrated. £5.00.) London: Butterworth and Co. Ltd. 1971.

The authors in the introduction define the scope of the book, which they have purposely limited to four 'review articles' on topics of current interest in haemoglobin research: (1) 'A correlation of the structural alterations of the haemoglobin molecule with function and possible clinical symptoms'; (2) 'A discussion of oxygen dissociation and 2, 3-diphosphoglyceric acid'; (3) 'Light thrown on the genetic control of haemoglobin synthesis resulting from the study of mammalian haemoglobin polypeptide chains; and (4) 'The chemical heterogeneity of the human γ polypeptide chain'.

None of the sections can be faulted in any way. Not unnaturally, because of the authors' special interests, one obtains the impression that it is in sections 3 and 4 that they write with greatest authority.

The contents of this book ensure that it has a specialized appeal. For example, the geneticist as well as workers engaged in haemoglobin research will find this book invaluable.

R. G. HUNTSMAN

Leukaemia Cytogenetics. By H. Jackson Woodliff. (Pp. xi + 146; 21 figures; 7 tables. £2.50.) London: Lloyd-Luke (Medical Books) Ltd. 1971.

Because of the relative ease in obtaining samples and of the steady advances in analytical methodology, chromosome studies in haematological abnormalities—leukaemias in particular—have grown into a large body of specialist literature. There has been, however, a dearth of reading material aimed at the nonspecialist or student. This brief monograph fills that gap. The succinct text is accompanied by a very respectable survey and list of literary references. The briefness of the text does not permit a detailed critical analysis of various findings, but the conclusions drawn at the end of the chapters are very

reasonable summaries with emphasis on the right perspective.

The new chromosome analytical methods to detect 'banding', eg, fluorescent staining, or the even newer, acid saline-Giemsa chromomere staining, arrived too late for leukaemia studies to be included in this book. These, however, might be features of a later edition, especially if—as it is hoped—they will contribute more specific information than the morphological data so far available.

L. G. LAJTHA

Basic Neuropathology. By Ursula Slager. (Pp. xiv + 311; illustrated. \$14.75.) Baltimore: Williams and Wilkins Co. 1970.

The author's purpose was to write an account of neuropathology in terms of the principles of general pathology and to dispel the notion that neuropathology requires highly specialized knowledge of the central nervous system and laboratory techniques to be a worthwhile study for the general pathologist. The readers' mind were residents in neurosciences preparing for board examinations in the United States, physicians in pathology or the neurosciences requiring a comprehensive but compact book of neuropathology, and medical students seeking more information on the subject than would normally be found in their medical course.

Dr Slager has largely succeeded in all these objectives. The book is concise, well written, and up to date. It is largely concerned with morphology but relevant information of a chemical, histochemical, and electron microscopical nature is included. The space allocated to different topics is appropriate and a sense of proportion is kept throughout the book by frequent reference to the incidence of various conditions and their importance in medicine and neuropathology. References for those inclined to pursue subjects further are well chosen and mostly remarkably up to date.

The book is well produced. It has virtually no typographical errors and achieves within a relatively short space a splendidly concise but comprehensive statement on the present position in relation to the diseases that affect the central nervous system. The illustrations, which are numerous, are of mixed quality; the photomicrographs on the whole being considerably better than the photographs of gross specimens, some of which are