The technical and secretarial assistance of Mr M. J. L. Rae, Mr T. Pogmore, and Mrs L. Richardson is gratefully acknowledged.

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Letter to the Editor

Immunoperoxidase method for detection of immunoglobulins

The immunoperoxidase method for the detection of immunoglobulins is a lengthy procedure and often involves a trypsin incubation stage.

In our experience, sections—particularly from skin biopsies—often lift or are lost altogether. Adhesives such as albumin, chrome alum, and amylopectin have been tried without success, and Romac C33¹ is no longer available. However, Cow Gum, a rubber solution (Li-Lo Ltd, Woking, Surrey, but also available from most stationers) when diluted with a little petroleum ether, smeared onto slides, and allowed to dry is a completely effective adhesive. Sections are then floated onto the prepared slides and incubated at 37°C overnight.

The adhesive is clear, does not affect immunoperoxidase reactions, and is sufficiently insoluble in xylene for the sections to be brought to water and finally counterstained in the usual way.

The non-wettable surface of the Cow Gum smear is an advantage in that it limits spreading of the reagents by increasing the angle of contact so that smaller volumes may be used and the risk of the section drying out is reduced.

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Book reviews

IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Humans. Volume 19. Some Monomers, Plastics and Synthetic Elastomers, and Acrolein. (Pp. 513; Sw.fr. 60.) Lyon: WHO. 1979.

The industrial production of various monomers and synthetic polymers has grown spectacularly in the last 30 years, but our knowledge of the potential hazards of these ubiquitous and often valuable materials has not developed in a commensurate fashion. Certain acute toxic effects in man have been known for some time in relation to materials such as styrene, acrolein, monomeric vinyl chloride, and the thermodegradation products of polytetrafluoroethylene. Most of the synthetic polymers were regarded as biologically inert until the first experiments were made showing that various plastics, implanted subcutaneously or intraperitoneally into animals, induced local sarcomas. The pathogenesis of such tumours is still obscure and 'solid-state carcinogenesis' remains difficult to reconcile with current genotoxic or epigenetic theories of tumour development. The literature contains isolated case reports of local sarcomas in patients with certain surgical implants but the carcinogenic risks of such materials appear so far to be extremely low. The situation changed abruptly in 1974 when the first human cases of hepatic angiosarcoma were described in workers exposed occupationally to vinyl chloride monomer, and at least 70 examples have now been reported. These are small numbers, but the widescale use of monomeric vinyl chloride and its polymers, and related

substances, makes the latest of the IARC monographs particularly timely.

Monomeric vinyl chloride, reviewed by IARC in 1974, is assessed again and its potent carcinogenicity is established beyond doubt. Considerable suspicion now falls on acrylonitrile and, to a lesser extent, on chloroprene and vinyl bromide. The latest monograph follows the same expanded format as the last few volumes in the series, with sections on mutagenicity and teratogenicity and, where appropriate, on intermediate metabolism. This latest volume provides a useful introduction to the clinical and experimental toxicology of a complex and still ill-understood group of substances in very wide daily use.

R. L. CARTER

Experimental Haematology Today. Edited by S. J. Baum and G. D. Ledney. (Pp. xvi + 256; illustrated; DM 68, US\$34.) Berlin: Springer-Verlag. 1978.

This volume is a presentation in book form of papers read at the Sixth Annual Meeting of the International Society for Experimental Haematology held in Basle, Switzerland in 1977. It is not a complete document of the meeting but rather a synthesis of the major contributions. The editors are to be congratulated on achieving a cohesive, well laid-out book within a year of the original meeting.

There are six sections to the book, covering a spectrum from fundamental experimental work to clinical bone marrow transplantation. It includes papers on the abrogation of graft rejection in dogs, and an interesting paper on anti-tumour effects of syngeneic marrow

grafts. There is a section on experimental work on the treatment of aplastic anaemia by ALG and a section on clinical bone marrow transplantation. This covers histocompatibility testing and the H-Y immunity phenomenon. The clinical results of marrow grafting for aplasia, leukaemia, and immune deficiency are reported from Seattle, UCLA, and Paris, but they are already out of date.

The final section of the book is a mixed bag called 'Advances in Experimental Haematology' covering a variety of topics including preservation of dog granulocytes and diffusion chamber cultures.

All in all this is a specialised book providing suitable reading for the growing number of experimental haematologists concerned with investigating new approaches to understanding and treating leukaemia, aplastic anaemia, and immune deficiencies. It is a good memento of the conference but, like all proceedings, its useful life must be measured in months not years. It is not for the uninitiated who would do better to wait for a definitive review on the last decade of experimental haematological research.

A. J. BARRETT

Tumors of the Cardiovascular System. By H. A. McAllister, Jr. and J. J. Fenoglio, Jr. (Pp. 141; illustrated; \$5.) Washington: Armed Forces Institute of Pathology. 1978.

This fascicle is part of the second series of tumour pathology and is based on the material collected by Dr W. C. Manion with many new examples and entities added in the years following his untimely death.

This volume is divided into four major sections: primary benign tumours and cysts, primary malignant and metastatic tumours of the heart and pericardium. The fourth section deals with primary tumours of major blood vessels.

The text is succinct throughout and types of tumour, their location, the variety of clinical manifestations together with the number of patients are clearly tabulated. Wherever the origin of a neoplasm is controversial this is logically discussed. Diagnostic aspects are emphasised and the World Health Organization international classification of tumours is closely followed. One has become accustomed to the excellence of the many illustrations in these publications and the present fascicle is no exception.

This publication is a 'must' for all practising pathologists, not only those concerned with the study of the heart but every worker dealing with surgical and necropsy material.

E. G. J. OLSEN

Cancer Registration and its Techniques. Edited by R. MacLennan, C. Muir, R. Steinitz, and A. Winkler. (Pp. xii + 235; illustrated; Sw.fr. 40.) Geneva: WHO. 1978.

In the foreword to this book John Higginson, director of the International Agency for Research on Cancer, says '... Registration (of cancer) is not a sufficient reason to begin an undertaking that requires a long-term investment of effort and funds'. This is a timely warning to those thinking of embarking on the organisation of a new hospital-based or population-based registry, particularly in developing countries. However, the value of cancer registries, whether for their contribution to patient management, health service planning, or for the elucidation of causes, is established and pathologists have played a major role in their initiation and maintenance.

This monograph represents the cumulative experience of many individuals as well as the specialised knowledge of the four authors. The chapters include Planning a Registry, Sources of Patient Information, Case-finding, Input Operations, Classification and Coding of Neoplasms, Output Operations and Reports, Data Processing and Cancer Registration in Developing Countries. This book is an invaluable manual for all concerned with cancer registration or who are interested in cancer epidemiology.

M. S. R. HUTT

The Hospital Laboratory. By R. M. Shuffstall and B. Hemmaplardh. (Pp. xi + 208; illustrated; £8.50.) London: Medical Publishers Ltd. 1979.

This is a book designed primarily for those interested in the organisation of laboratories in America. Unless there is a marked change in management and financial procedures within the NHS the contents will be of only limited relevance to the practice of pathology in this country.

The book is full of management jargon and in parts is extremely verbose. For example, planning is described as 'the

methodical selection of a series of complementary actions for the purpose of pursuing an improved position' while market potential is the 'proven or estimated expenditure for given services in a given locale or as projections of these expenditures contingent upon specific plans and anticipated developments'.

Much of the comment and managerial expertise on planning, organisation, staffing direction, supervision, communication, and personnel relations is self-evident, although there are useful chapters on research and development and quality control. What a pity the latter is not dealt with in considerably more depth!

Chapters on cost control, financial planning, capital budgeting, and pricing are of little use to NHS laboratories although they may prove useful to that small number of private laboratories operating outside the Health Service.

G. W. PENNINGTON

Microbial Disease. The Use of the Laboratory in Diagnosis Therapy and Control. By D. A. J. Tyrrell, I. Phillips, C. Steward Goodwin, and R. Blowers. (Pp. x + 340; illustrated; £16.00.) London: Edward Arnold. 1979.

It is necessary when assessing the value of this book to accept the intention, expressed in the preface to provide to a doctor presented with a clinical problem information on what laboratory tests to initiate, the meaning of results, and the action to take. This is the role the book best plays. It cannot be regarded, and is not intended in any sense, as a textbook of microbiology nor of infectious disease but the authors of necessity have had to maintain the width of scope of their text. The constraints of space, therefore, together with an apparent determination to avoid being accused of leaving out any organism or condition however obscure, have made it difficult to achieve satisfying depth on any subject.

The book is crisp and clear in its technical parts and as topical as is possible in a formal publication, but the more discursive passages are spoiled by errors of grammar and punctuation. The use of a dash to replace the comma and of a semi-colon where a full-stop is indicated is a real irritation.

The book is divided into chapters on each system of the body, and this inevitably is followed by a large section on diseases not confined to one system with