activity in concentrated salt solution. Chapters V and VI deal with the clotting defects of oral anticoagulants and of congenital bleeding disorders respectively and a long final chapter discusses the nature of serum.

This volume is an important attempt to bridge the conceptual gap between Dr Seegers' own work and that of others, especially if read in conjunction with the recent reviews of Macfarlane and of Biggs (*Thromb. Diath. haem.*, 15, 591 and 603, 1966) it leaves no one with the excuse that he cannot at least begin to understand Dr Seegers' work.

G. I. C. INGRAM

MYOCARDIAL INFARCTION Proceedings of the 9th Conference of the International Society of Geographical Pathology, Leiden 1966. *Separatum Pathologia et Microbiologia*, vol. 30, no. 5 (1967). (Pp. 323; 91 figures, 99 tables. 137s. 6d.) Basel and New York: S. Karger. 1967.

This well produced paperback volume records the proceedings at the Ninth Conference of the International Society of Geographical Pathology which was held in Leiden in September 1966. This meeting was planned to survey the results of a world-wide prospective inquiry (covering the period June 1964 to June 1965) into the frequency of myocardial infarction in necropsy material in different geographic regions. The first section of this volume records the observations of participants from some dozen localities varying in size from the U.S.A. (W. B. Wartman) on the one hand to Wales (D. J. B. Ashley) on the other. As there was little prior consultation and planning as to how material was to be collected and assessed it is not surprising that these contributions, though individually interesting, form little basis for quantitative geographic comparisons. In a later section of the book W. B. Robertson's paper on the International Atherosclerosis Project draws attention to the careful planning which is necessary for such comparisons to be meaningful.

Section II is an assortment of papers on biochemical and pathological research in cardiovascular disease, while section III comprises a number of epidemiological studies.

The book is a useful source of reference to workers in these fields.

T. CRAWFORD

CARCINOGENESIS: A BROAD CRITIQUE Papers presented at the Twentieth Annual Symposium on Fundamental Cancer Research, 1966. University of Texas M.D. Anderson Hospital and Tumor Institute. (Pp. xii + 774; illustrated. 147s. 6d.) Baltimore: Williams and Wilkins; Edinburgh and London: E. and S. Livingstone Ltd. 1967.

The aim of this symposium, as stated in the introduction, is to take 'a broad look at the problem of human carcinogenesis from multiple approaches' and 'the major concentration is directed towards an understanding of the carcinogenic process in man'. The aim is attained and we are presented with some 36 papers setting out

the present state of work on carcinogenesis and the trend of future researches. It is impossible in a short review to detail the work of so many experts but the method of presentation is generally good and each paper has a comprehensive bibliography. In most there is a section given to discussion and many have a useful summary. Summaries are omitted from some papers, detracting from their value for rapid reference.

The volume is divided into five technical sections: (1) The aetiology of lymphomas and leukaemias (13 papers); (2) carcinogenesis in mammary tissues (seven papers); (3) carcinogenesis in the liver (six papers); (4) dedifferentiation and transformation of cultured animal cells to neoplastic states (five papers); and (5) the general status of chemical and physical agents in carcinogenesis (five papers).

All but seven of the papers are from American sources and much of the work of which this volume is a record and progress report concerns viruses and their role in carcinogenesis. The illustrations, many of them studies by the electron microscope, are numerous and of high standard: in fact the format of the whole book is good.

A combined index, subject and author, is included.

This volume, like other symposia from the same source, forms an important year book for cancer research workers, and the general pathologist will find it useful as a source of reference on particular aspects of cancer pathology.

G. STEWART SMITH

HANDBOOK OF EXPERIMENTAL IMMUNOLOGY Edited by D. M. Weir. (Pp. xiv + 1234; illustrated. £8.) Oxford and Edinburgh: Blackwell Scientific Publications Ltd 1967.

That immunology prospers so steadily today is due at least in part to the continual perceptivity of experimental immunologists in recognizing the usefulness of techniques originating in other fields—a multidisciplinary habit of obvious evolutionary advantage. The marvellous aptness of methods, such as gel diffusion, chromatography, and isotopic and fluorescent labelling, to immunological analysis has stimulated experimenters to adapt an ever-widening range of similarly discriminating physico-chemical and cytological techniques to their purposes, a process of accretion that has swelled the appetite for technical know-how of the would-be experimental immunologist to famine proportions.

Dr Weir has made a heroic effort to feed the hungry. He has extracted from 42 contributors 36 chapters dealing authoritatively, and in more or less detail, with most of the procedures used in modern immunology laboratories. The special aim of this book is to provide discussions of background, and of underlying principles, as well as practical details and applications, and for the most part its contributors have reached a high level of appraisal of the methods they describe.

The book is in five sections. The first deals with the isolation of immunoglobulins, and with methods of studying their synthesis *in vitro*, their molecular structure and their genetics; this and the second section on the preparation of antigens from microorganisms (including viruses) and tissues provide useful guides to the com-

pendious literature on these subjects, as well as much practical aid.

A third large section on the demonstration of antigen-antibody interactions presents a selection of modern methods, ranging widely from measurement of antigen-binding capacity to analysis by passive cutaneous anaphylaxis; following this are five chapters on the application of immunological methods to the study of viruses, funguses, tissue components, protozoa, and helminths. Another five chapters deal in the fourth section with some methods in current use for studying cellular immunity and transplantation antigens, although with surprisingly little mention of the currently popular methods of measuring lymphocyte transformation. Finally there are some notes on the experimental study of allergic reactions and their mediators and a chapter on the demonstration of human reagins.

This is not a book for the uninitiated. For the experimenter who knows his way about the literature and the laboratory it will be a respected counsellor.

E. J. HOLBOROW

IMMUNOHISTOCHEMIE Edited by H. von Mayersbach. *Acta Histochemica*, suppl. 7. (Pp. 427; illustrated. £9 10s. 3d.) Jena: VEB Gustav Fischer. 1967.

This 1967 supplement to *Acta Histochemica* is, in effect, the proceedings of a symposium on immunohistochemistry organized by the German Gesellschaft für Histochemie and held in Nijmegen from 26 to 30 October 1965. Edited by H. von Mayersbach and preceded by a list of participants, it contains 45 papers and covers the whole field in a very comprehensive manner. Most of the papers are in the German language, six in English, and one in French.

Proceeding from a consideration of the structure of immunoglobulins (Ceróttini) papers are presented on the lytic function of complement, on antiserum production, the use of adjuvants, and the purification of proteins. Agar and immunoelectrophoresis are considered by Götz and related papers follow. The volume contains valuable papers by H. Harms (on the chemistry of labelling reagents) and by Arne Hansen (giving spectral data on fluorescent tracers). A second paper by this

author (with E. Hokenson) illustrates, in colour, the use of azo dyes for masking non-specific fluorescence. R. Leske describes the paper chromatography of fluorescent labels and the technique of fluorescein labelling is given by G. Rentsch. The many papers which follow deal with a variety of topics including ferritin labelling (Vogt), which cannot be considered out of place in view of the title of the Symposium, and unspecific staining (Mayersbach). There follows an excellent series of papers (Gabler, Trapp, Ploem, Otto, Rigler, Korting and Voss, and Reynen), lavishly illustrated with coloured photomicrographs and coloured and black and white line drawings, which deal with theoretical and technical aspects of fluorescence microscopy.

The volume concludes with a miscellaneous section containing, among other contributions, three papers on diagnostic uses of immunohistological techniques. This volume of proceedings forms an interesting addition to the literature of immunohistology and its chief value is, perhaps, that it brings together much information which is otherwise available only after patient search in the library.

I do not imagine that it will be widely read by English-speaking scientists, most of whom will probably remain unaware of its existence.

A. G. EVERSON PEARSE

THEORY OF CHEMICAL PATHOLOGY TECHNIQUE By Ronald A. McAllister. (Pp. vii + 185; 14 figures. 38s.) London: Butterworths. 1967.

This is a work for medical laboratory technicians, a field which stands in serious need of good texts. The one before us is not a good text.

The pattern of the book is disjointed. The title shows that the writer appreciates that the candidates need to understand the theory of their work. In practice what has resulted is largely another 'cook book'. Your reviewer had the impression that lecture notes, from what may have been excellent lectures, had been printed with little editing.

Slips are too numerous to merit individual attention, but why give the same table twice (Tables 35 and 36)?

ARTHUR JORDAN