Fig. 4 *Anti-*L. pneumophila* ELISA IgG titres in sera with IFA titres of <1/16 and ≥1/16 using Falcon Flexible plates.*

plate assay and found to be satisfactory.

Results of ELISA assays in Falcon Flexible plates (Figs. 3 and 4) showed much better correlation to IFA titres. Three hundred and five/384 sera with IFA IgM titres of <1/16 had an ELISA IgM titre of <1/20 and the highest ELISA titre in this group was 1/320.

The relatively small number of sera with IFA titres of <1/16 which gave ELISA titres

of 1/20 in Figs. 1–3 is an artefact due probably to harsh selection of sera for further titration. However, since this was done in the same manner for all assays, it should not have biased the results.

In our assay employing Falcon Flexible plates, we obtained results which were in good agreement with our previous study¹ and the correlation between IFA and ELISA was good. Relatively few sera with

IFA titres of <1/16 gave ELISA titres of >1/80. All sera with IFA titres of ≥1/16 had ELISA titres of ≥1/20, and the ELISA titres (particularly IgG) were generally much higher than the IFA titres.

We have therefore found that using the correct microtitre plate, our modified indirect ELISA test is reliable and specific, and more amenable to large scale routine or survey work than IFA.

This study underlined the value of performing extensive evaluation of the ELISA assay conditions. Our tests with small numbers of sera showed Nunc plates to be satisfactory, and it was only when a large number of negative sera (by IFA) were tested by ELISA that we realised there was a problem.

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Book reviews

Current Topics in Inflammation and Infection. Ed G Majno, RS Cotran and N Kaufman. (Pp 242; illustrated; £28.50.) Williams & Wilkins. 1982.

The last decade has seen a revolution in our understanding of the processes involved in the inflammatory process. This expansion of knowledge has come about largely through the application of the experimental approaches and the insights derived from cell biology. The picture thus revealed in this volume, inchoate in part though it still remains, makes fascinating reading. Historical perspectives receive their due need of attention in the form of an elegant overview of some of the "historical highlights" of inflammation written by Guido Majno. The rest of this fairly slim volume is divided into seven chapters dealing with various aspects of the pathobiology of acute inflammation and five chapters which consist of "updates" of our knowledge in a number of specific disease areas. Amongst so many excellent contributions perhaps it is invidious to single any out, but

the chapters on chemotaxis by Peter Ward and on the role of proteases and oxidants in tissue injury by Aaron Janoff and Harvey Carp are, in my view, of outstanding interest.

The book is well produced and by present day standards moderately priced. I can thoroughly recommend it to all biologists, medical and otherwise, with an interest in this important field.

N WOOLF

Recent Advances in Neuropathology. Ed W Thomas Smith and JB Cavanagh. (Pp 301; illustrated; £23.00.) Churchill Livingstone. 1982

Since the publication of the first volume in this excellent series many new developments in clinical and experimental neuropathology have led to a growing need for a sequel. As with the previous volume this book takes the form of a series of reviews written by neuropathologists and neuroscientists of international reputation. The aim has again not been to survey the whole field of neuropathology, but rather to highlight various subjects of current interest. These range from experimentally

orientated topics, including chapters on microglial function and neuronal cytoskeletal proteins through to recent developments in more clinically related areas such as Creutzfeldt-Jakob disease and non-missile head injury. There is also an important chapter on immunohistological techniques which are of increasing relevance in both research and diagnosis. There is a high standard of illustration throughout the book and the texts are clear and informative. This is not only an essential item for all neuropathologists but can be recommended as stimulating reading for any clinician or pathologist with an interest in the nervous system.

DB BROWNELL

Techniques in Immunocytochemistry. Vol 1. Ed GR Bullock and P Petrusz. (Pp 306; illustrated; £24.00 \$49.50.) Academic Press Inc. (London) Ltd. 1982.

This is the first of a series of volumes on immunocytochemistry which are intended to cover all the major techniques and applications in this field. The authors include anatomists, pathologists, micro-

biologists, and biologists, with a strong contribution from Oxford. The first chapter is a comprehensive review (by Brandtzaeg) of tissue preparation methods and particularly fixation; and each of the subsequent chapters is devoted to one technique. Those covered include double-label immunofluorescence (Pryzwansky); the unlabelled antibody peroxidase-antiperoxidase (PAP) method (Burns); the protein A-gold technique (Roth); double immunoenzymatic labelling (Mason and Woolston); and the use of proteolytic enzymes (Finley and Petrusz). Each chapter has a wide range of relevant references, and methods suitable for light and electron microscopy are discussed. Although much of the text consists of methodological detail, it is still very readable. In the current rush to use antibodies with tissue sections, much work of poor quality is being carried out, and this volume should be a considerable help to those in difficulty. Even the experienced investigator will learn a great deal from it. It is a well-produced book, with good illustrations, which fills a gap in the literature. It is highly recommended.

RC CURRAN

Clinical Cellular Immunology. Molecular and Therapeutic Reviews. Ed AA Luderer and HH Weetall. (Pp 391; illustrated; £36.75.) John Wiley & Sons Limited. 1982.

"Clinical Cellular Immunology" is a collection of review articles by different authors. It aims, in the words of its editors, "to create a work combining aspects of cellular immunology with their clinical applications." The great problem which the authors face is that most of the relevant work on cellular immunology has been done in experimental animals. The clinical applications of this work are by no means clear, and few of the chapters bridge the gap between experimental observations and clinical relevance. The first two chapters are very good accounts of current basic immunological concepts.

I suppose it would be difficult to deny that most advances in immunological knowledge have indirect clinical implications, in that understanding is the first step to prevention or cure. But certainly the title of the book made me expect a more clinically orientated work. Even chapters 3 and 4 by Sigel and colleagues on immunosuppressive agents (some 150 pages in the 390 page work) hardly mentions clinical data—there are two and a half pages of

glossary to help understand the wealth of experimental information.

The chapter on non-Hodgkin's lymphoma seems particularly poor in defining these conditions in the light of modern knowledge of B cell differentiation—although this is still a somewhat contentious area. Chapter 6 by Burek and his colleagues is a useful reminder of the evidence for the involvement of cell mediated immunity in autoimmune disease, but makes little effort to encourage new perspectives or to indicate the practical consequences of these observations. The chapter on transfer factor is largely theoretical and gives no indication of how clinically useful (or useless) this procedure is. The final chapter on "immunological tests for diagnosis and monitoring of defects in cell mediated immunity" by Fudenberg and colleagues is remarkably sketchy—almost an afterthought.

This book is not recommended for personal purchase, but it may be a useful supplement to a departmental library.

RA THOMPSON

Immunofluorescence Techniques in Diagnostic Microbiology. PHLS Monograph Series no 18. Ed Joan MB Edwards, CED Taylor and AH Tomlinson. (Pp 117; £3.50.) HMSO. 1982.

This monograph provides a succinct compendium of the immunofluorescent techniques which have been accepted for routine use in the Public Health Laboratory Service and associated Reference Laboratories. There are short descriptions of equipment, standardisation, and labelling procedures, and a series of sections describing the methods used for detecting different micro-organisms and antibodies. Most of the established reference and routine uses of immunofluorescence are described except, unfortunately, those for the detection of legionella organisms and their antibodies. There is a short comment on interpretation in each section, but the monograph is essentially concerned with techniques which are described with precision and clarity.

This collection of well-tested methods, resulting from the extensive experience of the PHLS will be very welcome. It will provide an authoritative source of methodology and will be valuable to laboratories setting up their own procedures.

PJ SANDERSON

Urinary Tract Infection. Rosalind Maskell (Pp 144; illustrated; £15.50.) Edward Arnold. 1982.

In the small compass of ten chapters Dr Maskell has reviewed the pathogenesis, diagnosis, localisation, natural history, management, and antibiotic treatment of urinary tract infection, has considered the particular problems of such infections in children, and in adults at home and in hospital, and tuberculosis of the urinary tract. The book is well written and will be appreciated by specialist microbiologists and infectious diseases clinicians, and also by clinicians with a general interest in the subject. That is important because of the significance of UTI in all fields of clinical practice.

The choice of subject matter is necessarily selective but the 240 or so references listed are fairly chosen to present different views. Dr Maskell's own contributions to the subject are, not surprisingly, given prominence with considerable discussion of the importance of micrococci and capnophilic organisms as pathogens. Although not all of Dr Maskell's opinions will be accepted by those engaged in research on the subject, that is not a reason for not reading her stimulating book. It should be available in all medical libraries.

RN GRÜNBERG

Microanalysis in Medical Biochemistry. 2nd ed. IDP Wootton and Heather Freeman. (Pp 297; illustrated; £9.50.) Churchill Livingstone. 1982.

It is a pleasure to welcome a completely rewritten edition of this laboratory bench book after a long interval. The authors have been assisted by a number of distinguished contributors. The new format is clearly printed and it is easy to find the section one requires; there is a good index.

As before, the well tried colorimetric, nephelometric, and spectrophotometric methods which are quoted in some detail, relate to basic apparatus to be found in reasonably equipped laboratories in any part of the world. Specialists working in more sophisticated laboratories using complex continuous-flow, discrete sampling, and centrifugal analysers, (reference to which is made in this edition) will find that this book still has an important place in their libraries because of the wisdom based on many years of experience expressed in its pages. As a practical training manual it probably has no equal for any person, se-