REVIEWS

PROGRESS IN MEDICAL LABORATORY TECHNIQUE VOLUME 4

Edited by F. J. Baker, F.I.M.L.T., F.I.S.T, F.R.M.S.
(Pp. 209 + vii, illustrated. Price £2.18s.)
London: Butterworths

The editor managed to extract from 13 contributors, 12 chapters of the latest laboratory techniques. All the twelve chapters are very well written and illustrated, especially the chapter on fluorescing antibody technique. The different fluorochromes, how to conjugate them, the correct optical apparatus and filter are described so clearly that even the uninitiated might feel that he is able to set up a fluorescent test. In the first chapter, Dr. J.H. Darrell put out a simplified scheme for the identification of gram-negative rods. This should be useful for any routine diagnostic laboratory unless they already have a better scheme.

M. C. Bryant describes the bacterial sensitivity testing of the latest antibiotics, Lincomycin, Gentamicin, Capreomycin, Rifamycin and Ethambutol, and also the determination of their serum levels in patients. The chapter on the histochemistry of anaerobic dehydrogenases by D. Williams is almost purely academic, but then histochemistry requires little technique, the interpretation of the colour reactions is all academic. Jean E. Clarke compares beautifully the tests of pregnancy by immunological methods. This is most useful for the general practioner who is thinking of setting up a quick test in the back-room of his clinic for the diagnosis of Pregnancy. In chapter 8, J. R. Williamson describes a method for the counting of platelets, leucocytes and erythrocytes electronically, this is invaluable for the laboratory which is budgeting for a COULTER counter.

The training of medical laboratory technicians is changing from one which covers all fields of medical laboratory work to one of specialization. The field has become so wide that a technician cannot be expected to know all the tests that go on in a medical laboratory. From the budding students to the retiring medical specialists, every one would find this book most useful when he wants to know how a certain test that he has not heard of before is performed in the laboratory nowadays. The various methods are described, step by step and even the reading and interpreting of the results are given in detail. This can be dangerous especially when there is no law against an unqualified person setting up a medical laboratory.

Moses Yu

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THE STRUCTURE AND FUNCTION OF MEMBRANES, BRITISH MEDICAL BULLETIN

Vol. 24 No. 2 (May 1968), *Ed.* D.H. Northcote M.A., Ph.D., Sc.D., F.R.S. pp. 186. £2.

In his introduction Sir Rudolph Peters states that the object of this Bulletin is to present a cross-section of the research now in progress in this field of membranes. It contains sixteen specially written articles each by an active research worker and it is therefore of primary interest to specialists in biochemistry or physiology. An appraisal of the titles of the articles from the point of view of their *medical* interest might lead the reader to omit those on plant membranes and on insect cuticle. In the latter case particularly, this would be unfortunate, for the account given by Dr. Beament of the properties of insect cuticle and the bearing this has on membrane structure makes fascinating reading and, in contrast to some of the other articles, it is beautifully written.

An odd feature of the history of theories about membrane structure is that prior to about 1963 the Davson-Danielli model of a bimolecular leaflet of lipid sandwiched between layers of protein was universally accepted and little time was spent in critical evaluation of the experimental evidence for this model. Then quite suddenly in a number of different places the idea that membranes might well be composed of an array of spherical lipoprotein micelles was taken up. There were always good theoretical grounds for investigating this pos-

the field of sex, and also how frequently current pronouncements on sexual problems are base on theories, concepts, and morality, rather than on actual sexual information with epidemiology and therapeutic predictability.

Nevertheless, it is a book to be welcomed in that a start has been made to discuss sex in the open, and such discussion, if not greatly enlightening to the serious student, cannot fail to increase interest, and would help the maturing of society in its attitude to sex. As such, whilst it does not, other than in a few places, provide an acceptable finality as authoritative sources in sex information, it is an important begining of a new endeavour in a field of medicine which is much neglected and yet of great importance.

Gwee Ah Leng

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HISTOLOGICAL TYPING OF LUNG TUMOURS

By L. Kreyberg in collaboration with A.A. Liebow & E.A. Uehlinger
W.H.O. Publication, 1967

Histological typing of lung tumours is either very simple and straight forward or excruciatingly difficult to pathologists. However, since lung tumours have been increasing in numbers and pathologists have become more critical in the last 50 years, it is not surprising that WHO made this group of tumours the subject of their first international histological classification. This small compact booklet is written mainly by the above authors with the help of material and opinions from 17 other collaborating centres throughout the world.

This booklet has only 28 pages of text and 40 coloured microphotographs. The first four pages under the title of "Preface" explain how it came about for WHO to bring out this publication. The next six pages are devoted to general principles of lung tumour typing with a brief sketch on the historical aspects of histological classification by reknown workers in this field. The actual classification and its explanatory notes occupy the next eight pages. These are the sum total of the text.

The classification itself is very comprehensive and has 13 main headings. Nine of these are typing of the epithelial tumours, whilst sarcomas, unclassified tumours, mesotheliomas and melanomas go to make up the remaining 4 categories. Whilst the 9 main types with their sub-types are very well grouped, it is rather doubtful whether the "mixed salivary gland type" of lung tumour should have been categorised together with "carcinosarcomas of embryonal type" and other carcinosarcomas. It would have been more appropriate to put these "mixed tumours under "Bronchial Gland Tumours" as most (if not all) of these "mixed" tumours are derived from the myo-epithelial cells of the bronchial glands. The carcinoid tumours have been separated from the bronchial gland tumours, and I think this step is judicious as we are now certain of the histogenesis of these tumours. These are derived from the branched "neurosecretory" cells with their distinctive granules, and they are situated together with the myo-epithelial cells near the basement membrane of the bronchial glands. A new category of tumours which is labelled as "Papillary Tumours of the Surface Epithelium" is based anatomically on the site of origin. Most of these arise near the carina and trachea and they have a better prognosis than the bronchogenic tumours.

The 40 microphotographs are of good quality and they do exemplify the categories of tumour mentioned in the book. The coloured microphotographs are made much more startling and picturesque by a special stain developed by Professor L. Kreyberg. This stain which brings out the keratin and mucin-like substance is actually a combination of Masson stain and Alcian green, and the method is spelled out in the annex of this book.

In conclusion, this looks like a workable histological classification, and it is hoped that future clinicopathological co-relation studies will add a prognostic value to it.

Kheng-Khoo Tan

sibility since it presents a dynamic rather than a static picture of membranes, which accords well with the high activity of these systems. Quite soon experimental evidence for this view was accumulated and it became evident that one had to be very careful in equating a structure in a fixed preparation with the probable structure in an actively metabolism living system. This change in thinking is admirably presented in the articles by Professor Lucy, Dr. Whittaker and others.

An equally important trend in research on membranes is the attention now being devoted to components of membranes which occur in relatively minute concentrations. These include perhaps most of the components which are of real importance in membrane functions. There are the relatively isolated sites at which facilitated diffusion of sugars takes place, the sites of adenosine triphosphatase activity which are closely connected with the active transport of Na^+ and K^+ ions across the membrane, the antigenic sites and the numerous sites at which polysaccharides can be bound. At the present time there is a very active search for techniques which can be used for isolating, purifying and characterizing these components, and a stimulating feature of many of the articles is that a description of a new technique which has produced new data (perhaps considered unattainable a few years ago) is often accompanied by a lament that there is still so much that is unknown.

The general reader who might wish to modernize his knowledge of membranes by a quick reading of the volume, ought I think to be warned that this will be a much lengthier process than he thinks. Some of the writers make no concession to the reader's possible unfamiliarity with new technical terms, with previous specialized reviews or with new experimental methods. All such matters are covered by references to previous publications so that unless some background reading is undertaken a lot of the value of this Bulletin will be lost. I think it a fair criticism of the Editorial Board that the instances of this kind of thing are so numerous, because it would be a pity if too many readers were put off by the lack of background explanatory material whose inclusion would not have unduly increased the size of the book.

B. Cowlishaw

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SEX AND ITS PROBLEMS

Edited by W.A.R. Thomson, E. & S. Livingstone Ltd.
Edinburgh and London 1968. Pp. 90, Price not marked.

As the Forward to this book stated: "Sex and its problems have never held high priority in the medical curriculum, ... except for the specialist, whether gynaecologist, urologist, venereologist, or psychiatrist, the ordinary doctor had to learn how to handle the problems of sex, as presented by his patients, the hard way." Few would disagree with such sentiments except perhaps to go even further to observe that with society attitudes and personal taboo, the study of sex even in the best of hands such as Dr. Kinsey has been beset with difficuties and the information so far available has not been entirely satisfactory from a statistical point of view. Hence sex is not only a problem for the student or the ordinary doctor, but even the self-professed specialists are ignorant and apt to make unfounded assertions!

This book is a republication of the series of article on "Sex and its Problems" appearing in the Practitioner in 1967, with contributors ranging from Endocrinologist like Bishop to Gynaecologist like Stallworthy, and Psychiatrist like Post. The subjects cover a wide field from endocrinal basis of sex to impotency, frigidity, homosexuality and perversion. The editing is of a high standard, and the planning of the series is well done so that overlap of material is minimal, and each contribution stands on its own and in many ways compliments one another.

However, perusing this book, it is apparent that whilst the specialists in sexualology are unquestionably knowledgeable in certain aspect like hormones, enzymes, chromosomes, and laws, they have very scanty reliable information about the others, and many of the statements about sex read more like sermons from the pulpit, or speculations of Freudian psychoanalysts than scientific bits of information. This goes to show how great is the handicap in the present society facing the serious worket in