Letter to the Editor

Alkaligenes faecalis in incubator humidifiers

Respiratory infections play an important part in the problem of nosocomial infections (0.5-5% of hospital inpatients). Respirators, particularly those incorporating nebulizers, are a major potential source of nosocomial Gram-negative pneumonia (Sanford and Pierce, 1971). The probable mode of entry is fluid aspirated from the pharynx, a phenomenon known to occur during sleep in healthy people (Amberson, 1937).

Eight incubator humidifiers were examined. One humidifier was empty and dry, three contained tap water, and four contained water sterilized by autoclaving. Cultures were made in duplicate on horse blood agar plates and incubated overnight at 37°C and at room temperature. There was no growth from the dry incubator, but the other seven yielded a Gram-negative bacillus, which was identified as *Alkaligenes faecalis* because all isolates bore lateral flagella and produced catalase and oxidase; nitrogen was produced from nitrate under an agar plug. None fermented sugar (Cowan and Steel's method) or split glucose (Hugh and Leifson's method), fat (Tween 80 in Sierra's test) or protein (milk). A similar organism was isolated from the detergent, Teepol, used to clean the incubators. No infection has yet been found among the babies which could be attributed to the humidifiers, but the widespread pattern of antibiotic resistance in the isolates has made us even more aware of the need to eliminate the organism from the babies' environment.

Rubenstein and Fowler (1955) describe two outbreaks of salmonellosis in the newborn related to aerosols from contaminated water traps of resuscitators. Edmonson *et al* (1966) found in an air sample of nebulizer tents that 53% were heavily contaminated with *Pseudomonas* and 30% with *Alkaligenes faecalis*, and that 50% of particles when delivered to the mouth or nose are capable of entering the bronchial tree.

We have met the situation by autoclaving the Teepol in 150 ml bottles at 96.5 kPa (14 lb/sq in) for 15 min. One of these is added to 28 ml of bleach and 4.5 litres of tap water. This has led to the eradication of this potential nidus of infection.

References

- Amberson, J. B. Jr. (1937). Aspiration bronchopneumonia. *Int. Clin.*, **3**, 126-138.
 Edmonson, E. B., Reinarz, J. A., Pierce, A. K., and Sanford, J. P. (1966). Nebulisation equipment: a potential source of infection in gram-negative pneumonias. *Amer. J. Dis. Child.*, **111**, 357-360.
 Rubenstein, A. D. and Fowler, R. N. (1955). Salmonellosis of the newborn with transmission by delivery room resuscitators. *Amer. J. publ. Hlth.*, **45**, 1109-1114.
 Sanford, J. P. and Pierce, A. K. (1971). Current infection problems. Respiratory. In *Proceedings of International Conference on Nosocomial Infections, 1970*, pp. 77-81. American Hospital Association, Chicago.

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Book reviews

Modern Methods in Medical Microbiology. Systems and Trends. Edited by J. E. Prier, J. T. Bartola, and H. Friedman. (Pp xviii + 201; illustrated; £9.25.) Baltimore, London and Tokyo: University Park Press. 1976.

This is a multi-author record of a symposium held by the Eastern Pennsylvania Branch of the American Society for Microbiology. There are chapters on methods for the rapid identification of micro-organisms such as the various antigen detection techniques, immunofluorescence, kits for identification of Enterobacteriaceae, and culture methods applicable to anaerobic organisms. The contribution on immunological diagnosis of bacterial and fungal diseases condemns the Widal test and lists the kits regarded as suitable for detecting various infections. Some methods for rapid diagnosis of virus infections are dealt with briefly, and there is a detailed chapter on the diagnosis of infectious mononucleosis. The techniques for diagnosing autoimmune diseases and the application of radioimmunoassay and radiometric methods are briefly described. There is a useful chapter on the application of gas liquid chromatography to organism identification.

This book may be of use for readers without any experience of modern microbiological methods in so far as it provides a comprehensive list of techniques and their applications. The quality of the contributions varies, the descriptions are on the whole very superficial, and only occasionally is any practical detail or advice given. The practising microbiologist requiring to learn the essentials of any of the techniques described would do better to look elsewhere.

D. M. JONES

Immunopathology of the Eye. By A. H. S. Rahi and A. Garner (Pp xii + 343; illustrated; £11.50.) Oxford, London, Edinburgh, Melbourne: Blackwell Scientific Publications. 1976.

The need for a work such as this has been very great: no longer can the subject be contained within isolated chapters in other volumes.

The structure of the book seems logical. Introductory chapters recall general principles and techniques; there follows a detailed description of immunopathologi-

cal changes in most parts of the eye and periorcular tissues; final chapters deal with tumours, systemic immune disorders, and therapeutic considerations. Classical views and recent papers are reviewed, and original work is incorporated. The figures include illustrative diagrams and immunological pathways while the photomicrographs and electron micrographs are excellent.

The authors are to be congratulated on their timely and valuable contribution which will surely be welcomed by ophthalmologists, ocular pathologists, research workers, and many others. The book will be of great assistance in teaching and will probably become the standard work in this specialized field.

D. R. BARRY

Atherosclerosis Drug Discovery. Edited by Charles E. Day. Vol. 67 in *Advances in Experimental Medicine and Biology*. (Pp 467; illustrated; \$45.00.) New York: Plenum Publishing Corporation. 1976.

This volume records the proceedings of a symposium convened in 1975 by a pharmaceutical company to discuss means of identifying and evaluating drugs preventing or reversing atherosclerosis. The first four sections contain papers on the use of various animal models for this purpose, dealing respectively with primates, the rabbit, rodents, and birds. The final section is made up of papers on tissue culture experiments using human or animal smooth muscle or other cells, and *in vitro* perfusion studies of human or animal arteries.

The material presented confirms and extends what is already known of experimental atherosclerosis, namely, that certain species are unsuitable; that even in susceptible species there is strain variation, which is genetically mediated, in the response to dietary lipid supplements (one paper using inbred mice and classical breeding experiments concludes this effect is due to a polygenic system of inheritance); that even hyperresponsive strains show individual and seasonal differences in response; and that no single animal model is ideal. In relation to drugs, apart from known hypolipidaemic agents, no convincing evidence is adduced of a breakthrough in therapy for atherosclerosis.

This volume contains much detail of potential value of those actively engaged in this field but, at the price quoted, is likely to be of limited interest to the general reader.

K. W. WALTON

Fluorescent Protein Tracing, 4th edition.

By R. C. Nairn. (Pp xvii + 648; illustrated; £17.50.) Edinburgh, London and New York: Churchill Livingstone. 1976.

A lapse of seven years between editions might suggest a deceleration in the progress of immunofluorescence techniques but an increase of 40% (up to 245) in the pages of references, now less than comprehensive, shows the continued growth. The bibliography has always been a valuable feature of this book, and through it workers in many disciplines have found the immunofluorescence applications in their field.

There has been extensive revision, and topics only emergent in 1969 are now adequately treated. The technique of incident-illumination is well presented; there is discussion of filters for excitation with narrow-band blue or green light; and emphasis on the advantages, in some uses, of excluding UV wavelengths.

The growing applications of membrane fluorescence are dealt with; living microbes, cultured cells, neoplastic cells and, especially, the staining of surface markers on lymphocytes. Another new development is the study of the IgM response to viruses for discriminating recent from remote infections. On the controversy over the relative merits of immunofluorescence and immunoperoxidase techniques the last paragraph concludes that their sensitivities are comparable and their applications complementary.

Alas this book which every 'fluorescent immunologist' should own has now reached a prohibitive price.

A. H. TOMLINSON

Clinical Otolaryngology and Allied Sciences,

Vol. 1, No. 1. Edited by P. M. Stell and A. D. Cheesman. (Pp. 102; illustrated. Published four times a year. Annual subscription £15.00.) Oxford, London, Edinburgh, Melbourne: Blackwell Scientific Publications. 1976.

ENT journals resemble each other closely and cover such a wide range of topics that one can only marvel that a surgeon who performs a commando operation may also be able to interpret audiometry or allergy testing results. The present journal is the mixture as before with one difference—the absence of those single case reports which pad out its contemporaries. Its editors hope to attract contributors from the continent.

Though head and neck pathology forms

a large proportion of the routine material passing through a busy histopathology department, it is exceptional to have to turn to the specialty journals for enlightenment. Tumours are better dealt with in oncology journals, the granulomatous in general pathology journals, and so on. There are exceptions, and in the present issue there is a useful article by Hyams and Michaels with the curious title of 'Benign adenomatous neoplasm (adenoma) of the middle-ear'. For the rest, the journal is well produced (trust Blackwell for that) and has got off to a promising start. I would like the editor to take a decision early on, that the little précis on pathology that surgeons feel obliged to include in their articles be looked at by the critical eye of a professional pathologist and either ruthlessly excluded or made to look something other than a laborious piece of copying. This requires courage, not lacking in the men who float a new journal in these tempestuous times. Bon voyage!

A. LEVINE

Current Trends in Sphingolipidoses and Allied Disorders. *Advances in Experimental Medicine and Biology*, Volume 68.

Edited by B. W. Volk and L. Schneek. (Pp. xvii + 612; illustrated; \$54.) New York and London: Plenum Press. 1976.

This book contains a collection of 38 papers presented at the 5th International Symposium on Current Trends in Sphingolipidoses and Allied Disorders held at the State University of New York in October 1975. In a rapidly expanding field the editors are to be congratulated on presenting a series of papers which genuinely give a comprehensive coverage of recent work in this field. The book contains the results of studies into the pathology, genetics, biochemistry, and diagnosis of sphingolipidoses, mucopolysaccharidoses, leukodystrophies and allied disorders.

The topics covered include some of the newer disorders, such as fucosidosis, mannosidosis and adrenoleukodystrophy, enzyme replacement therapy and experimental models of inborn errors. The book is invaluable for details of the many analytical techniques available for the study of enzymes and metabolites in tissues and body fluids. Each paper has a useful reference list, and overall the book is well presented. It has much to offer the specialist but should not be regarded as a standard text for every laboratory.

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