Book Reviews

Annual Review of Microbiology. Vol. 39, 1985, edited by L. Nicholas Ornston, Albert Balows and Paul Baumann. Pp. xii + 727, illustrated. Annual Reviews, Palo Alto, California, 1985. \$27.00 (USA) \$30.00 (elsewhere). Prices include postage and handling.

Microbiology must represent one of the most diverse of the natural sciences. Its study is important to the understanding of infective diseases of man, cancer and the production of drugs for their treatment. However this represents a small section of the discipline as illustrated in this volume. In the 28 reviews presented, the economic importance of medical and animal disease is shown by the depth of knowledge presented. They also demonstrate the inability of any person to have a broad understanding of all aspects of microbiology.

Although this volume presents most reviews as basic science, those on the mechanisms of bacterial resistance, opportunistic mycobacterial infections and viral taxonomy are written in such a way as to be digestible by a doctor with a general interest in microbial disease. The reviews on the antigenic variation of trypanosomes, oncogenes, environmental influences on the survival of bacteria in infections and *Candida albicans* are basic science reviews written with emphasis on the genetics and biochemistry of their subject. There is little attempt to represent these medical topics from the point of view of clinical medicine.

Other reviews deal with plant and insect pathogens, bacterial physiology, chemistry and genetics for a number of genera and bacterial functions. The importance of bacteria in food, engineering and energy technologies are also reviewed in several chapters.

This volume is aimed at scientists in the field of microbiology who may benefit from being informed on subjects outside their own interest, but the majority of clinical microbiologists and clinicians will not find much to read outside a special interest.

M.C. Kelsey
*Whittington Hospital,
London N19 5NF.*

Cervical Screening: a Practical Guide, Ann McPherson. Pp. i + 48, illustrated. Oxford University Press, Oxford, New York, Toronto, 1985. £1.95.

There is a growing public concern regarding the increase in the incidence of cervical neoplasia. Cervical screening is the chief method by which this cancer can be detected and provides the only means of early detection and a chance of a cure.

There exists at many public and medical levels a great vacuum in the understanding of this disease, its incidence, its mode of detection and treatment. The lack of comprehensive information on the subject contributes to the inefficiency, costliness, poor organisation and failures of the present cervical screening programmes. Some questions to be dealt with include: on whom, when and how often should the screening take place; who will provide the screening; how to

reach, inform and bring in the women for screening; how to organise a cervical screening campaign and an efficient recall system; understanding the information, terminologies associated with the disease; finances involved; and treatments available. All this and much more information has been gathered and presented clearly and concisely in this booklet published recently under the auspices of the Royal College of General Practitioners and The Imperial Cancer Research Fund. It should become a standard reference guide for all the medical, paramedical, nursing and reception staff at all centres where women are likely to attend for health reasons. All general practices, family planning clinics, and hospitals should have it on their shelves.

It would be helpful if the first three chapters dealing with the guidelines on cervical screening—the facts and primary prevention—could be available as a pull out supplement for schools and all academic institutions where enlightened teachers could organise these as suitable lectures to the girls who are in need of this timely information.

In the event of reprint it is suggested that the following additions be made—an index at the end of the book; groups at risk to include those women who began sex at or before 17 years of age or whose partners started sex at that time, as there is a growing evidence that early sex is an added risk factor; repeat smears to include inflammatory smears and women one year after they have acquired a new sexual partner. The reference to virginal women should be deleted as there are no documented cases of these women being subject to squamous cell carcinoma of the cervix.

The draft letters to patients are excellent but these should include the specific request for the date, result and name of the centre which took the last smear. If this information is not available then it would be advisable to do a smear for that patient. It would also be useful to include advice on the avoidance of pregnancy, preferably using barrier methods of contraception, pending the evaluation and treatment of the abnormal smear, and advice on how to deal with possible post-treatment complications. The notes for local information should include a list of names, addresses and telephone numbers of hospitals and specialists providing colposcopy services, both local and elsewhere, together with types of treatments available, e.g. laser, diathermy, cryosurgery.

In conclusion, this is an excellent booklet.

Jane Chomet
*The Crouch Hall Surgery
48 Crouch Hall Road
London N8 8HJ.*

Crisis in Uganda: the Breakdown of Health Services, edited by Cole P. Dodge and Paul D. Wiebe. Pp. xii + 262, illustrated. Pergamon Press, Oxford, New York, Toronto, Sydney, Frankfurt, 1985. \$11.00.

Introduction of westernised medicine to Uganda began in the latter years of the nineteenth and early years of the twentieth century and some of the major Christian missionary societies were in large measure responsible; one of the pioneers was Sir

Albert Cook of the Church Missionary Society. Subsequent growth was largely in the hands of the Colonial Administration (and later, the Ugandan Government) and Makerere University College (later Makerere University) and Medical School situated at Kampala. During the 1960s Makerere and its teaching hospital—the new Mulago—attracted scores of medical scientists of world renown; not only were standards of health care and teaching high, but a vast amount of research of international calibre was undertaken there. Of course this centre of excellence had its critics (but only an eccentric could label it a ‘white elephant’) and it was the *fons et origo* of the polarised controversy: teaching hospital *versus* primary health care in the ‘Third World’.

As Professor Raphael Owor, Dean of Medicine and Head of Pathology at Makerere University points out in the foreword to this book, it was during the period 1971–79 (the Amin years) amidst military misrule that Uganda’s social services were ‘thrown into disarray’; many members of the medical profession (including Ugandans) left or had to leave, whilst others were killed. Meanwhile ‘medical supplies became scarce’ and ‘staff morale deteriorated’. By 1981 there was a complete breakdown of medical services at all levels—subdispensaries, mission hospitals, right up to the national reference and teaching hospital.

This is a timely volume which contains essays from 37 contributors, all of whom have (or had) first-hand knowledge of Uganda’s health services. Maternal and child care receive due emphasis. The background to the crisis and subsequent breakdown of health services (at all levels) are set out in the first two sections. Then the Karamoja famine, the subsequent relief operation and the complexities of the resettlement programme are outlined, with some forward-looking on preparedness for similar disasters. The fourth (and last) section paints pictures of the current state of health services and medical education and looks to the future, taking into account lessons which have, and should have been, learned from the past and concentrating on delivery of *health* to the people of Uganda.

As Professor Owor writes, this collection of articles must not be looked upon as ‘an end in itself, but as a stimulus’. There is much thought here to catalyse those engaged in the reconstitution of health and social services in the ‘Pearl of Africa’ in the light of what has gone before.

G.C. Cook
Hospital for Tropical Diseases,
4 St Pancras Way,
London NW10PE.

Drug Discovery; the Evolution of Modern Medicines, Walter Sneider. Pp. x + 435, illustrated. John Wiley, Chichester, New York, Brisbane, Toronto, Singapore, 1985. £12.95.

Many works on drug discovery start too early with reams on the Chinese, Indian, and Greek contribution in antiquity and what the Europeans and Arabs did in medieval times, but for my liking finish too early in the 20th century. *Drug Discovery: the Evolution of Modern Medicines* deals with the past 100 years. The author is a pharmacist with experience in medicinal chemistry. The work is of general interest and will appeal to those connected with the drug industry and the health services. I liked the book for it is sufficiently different from others to be a welcome addition. There is a large

amount of information gathered and a good bibliography. I suspect that the book may in part be a personal homage to those whose endeavours have introduced therapeutic agents such as those used in leukaemia which have transformed this previously universally fatal disease.

After a short introductory chapter ‘A legacy of the past’ drugs are covered in a systematic way either by their function, such as antiseptics, or by their working on a bodily system. The text is illustrated by structural formulae which enable kinships and common derivations to be appreciated. In general, the formulae are easy to follow but the non-chemist would have been helped if key positions mentioned in the text had been numbered. Topics have been made more lively and enjoyable by interesting, human snippets and anecdotes which are at times even poignant. Why is it that discoverers of antibacterial substances have their nearest and dearest saved by them? As with history books, in general, thought is given to why certain events (drug discovery) occurred, when they did, (dates), why some workers succeeded when others failed (e.g. because the technology became available as when the vacuum freeze-drying of the coffee industry helped isolate penicillin) and what, in retrospect, were the significant advances and landmarks in medicinal chemistry. For example, one of the earliest attempts at modification of natural products, the production of semi-synthetic analogues of morphine and the synthesis of local anaesthetics of novel structure, served us a model for future synthetic approaches. Clinical pharmacologists in contrast to their mathematical skills are often shaky on chemistry and it is good to be told about Crum-Brown and Fraser’s classic work on chemical structure and biological activity and the curare-like effects of quaternization.

Nowadays drug innovation is seen mainly in the ‘Western’ countries (USA, Switzerland, Germany, France, Belgium, Japan, Sweden and the UK) as making, testing, launching and monitoring novel drugs requires the resources either of the state (cancer drugs) or giant corporations with the necessary capital, know-how, teams, management, direction, market research and economic and medico-legal advice. By comparison clever patent-avoiding modifications on existing drugs may be more profitable.

There are many and varied examples of how drugs were discovered often by chance (serendipity) or design. A hotch-potch of inspiration, perspiration, luck, accident, hard work, green fingers and even intrigue is involved. Disappointment may be the only reward. Drugs on testing may prove too toxic, have unforeseen problems or be too expensive to make, or the numbers who will benefit will be too few. Small and Eddy in the USA spent years of work and millions of dollars without finding the powerful, but elusive non-addictive analgesic but their contribution to scientific structure-activity relationships was invaluable. Many similar examples of the fruits and bitterness of discovery are mentioned. Time itself also makes medications obsolete to be replaced by better or more easily synthesized products.

The book begins with a backward look and I would suggest that perhaps the next edition might end with a forward look on how rational drug design is now possible and also perhaps consider some of the problems involved in discovering drugs.

J.G. Lewis
Edgware General Hospital,
Edgware,
Middlesex HA8 0AD.