lymphocytes is poor—EAC rosetting is given as a test for B cells, whereas it is unreliable because monocytes are also positive, and there is no mention of the use of antisera to define lymphocyte populations in man (perhaps the monoclonal expansion occurred before the manuscript went to print). The last 30 pages are devoted to detailed description of methods without any indications of the technical pitfalls.

The book is easy to read and could form a useful introduction for clinicians and others to the subject of immunological tests in rheumatic disorders—but I fear it is of less practical value than it could be.

RA THOMPSON

New Developments with Human and Veterinary Vaccines. Progress in Clinical and Biological Research. Vol 47. Eds A Mizrahi, I Hertman, MA Klingberg and A Kohn. (Pp 425; illustrated; £24.60.) Alan R Liss, Inc. 1980.

Although we usually pay lip service to the idea that prevention is the best way of dealing with disease it is difficult for many people to find much enthusiasm for the study of vaccination. Yet hopeful work is going on, both in the realm of the better application of vaccines, as for instance the Extended Programme for Immunisation of the WHO, and in the development of new and better vaccines, by applying new ideas and techniques in immunology, bacteriology, parasitology, virology, and "genetic engineering". This book contains papers and a discussion from a recent meeting in Israel, which was attended by a wide range of speakers. Some gave general reviews, some mainly described their own work, all of them spoke of genuinely new and up-to-date science. There were examples of getting to the molecular or submolecular basis of antigens as varied as tetanus and cholera toxins and influenza viruses, and progress reports on work towards entirely new vaccines, including those against hepatitis viruses. There were interesting summaries of vaccines against a number of important parasites and novel methods of exploiting the immune response including adjuvants.

Though reproduced by photo-offset from typescripts the text is readable, particularly because it is generally written in clear English and communicates interest, enthusiasm, and a breath of hope for the future. Anyone who wants to keep abreast of present and future advances in

the development of vaccines should read this volume.

DAJ TYRRELL

Non-Arthropod-Borne Togaviruses. MC Horzinek. (Pp 200; illustrated; £16.40; \$39.50.) Academic Press Inc. (London) Ltd. 1981.

This is the third volume in a comprehensive review series of recent advances in virology and viral infections of immediate topical interest.

Most togaviruses are arboviruses which are maintained in nature to a large extent by biological transmission between susceptible vertebrate hosts by blood-sucking arthropod vectors. Togaviruses are thus of enormous medical, veterinary, and economical importance in most parts of the world. The term non-arthropod-borne togaviruses is a useful and concise jargon name for viruses which, though far from being neglected as judged by their importance and the numerous publications scattered in medical and veterinary journals, have not been concisely and expertly reviewed.

The viruses and infections which are discussed in this volume include rubella virus, European swine fever (hog cholera), bovine viral diarrhoea, "border disease" of lambs, lactate dehydrogenase virus of mice, equine arteritis and simian haemorrhagic fever. For good measure, carrot mottle virus is thrown in since this plant virus resembles animal togaviruses rather than other plant viruses, as well as a cell-fusing agent found in mosquito cell cultures. Infections with these viruses lead to widely varying host reactions ranging from inapparent infection, abortion, and congenital malformations, and rapidly fatal illnesses.

The medical and veterinary clinical virologist, pathologist, immunologist, biochemist, and of course teachers of virology will find this monograph an elegant, scholarly, and comprehensive review of current knowledge, which will stimulate further interest in the world of viruses and its wide ramifications into genetic engineering, monoclonal antibodies, other aspects of biotechnology, ecology, and human and animal diseases.

AJ ZUCKERMAN

Notices

Winston Churchill Memorial Trust

Applications are invited for the Churchill Travelling Fellowships 1982. These are open to all UK citizens regardless of age, occupation, politics, religion, or race, and no special educational or technical qualifications are needed. Fellowships are offered in different categories each year and among those for 1982 is included "Medical research into the relief of pain" which is aimed at doctors, scientists, and research workers associated with the development of new methods to alleviate suffering. Candidates are asked to propose a project they wish to carry out in any country they choose. The grant will cover return air fare, plus all travel and living expenses abroad for a period of up to three months. Final selection by interview will be made in January 1982. For information please contact Winston Churchill Memorial Trust, 15 Queen's Gate Terrace, London SW7 5PR.