terms. The use of mole quantities and concentrations would resolve confusion likely to arise when substances existing in different forms were in use; the number of moles of active substance would remain the same even though salts of different mass, or of compounds with different amounts of water of hydration, for example, were being used.

IN REPLY TO DR A. M. BOLD AND HIS COLLEAGUES

Our paper has already been the subject of discussions within the professional organizations concerned for several years: no set of recommendations is ever final. It is likely that some of our recommendations will need to be modified in the light of experience, and others will certainly need to be added later, but a start had to be made.

We agree that guidance is needed for the units for plasma drug concentrations: it seems rational that the results of analyses of drugs, metals, and other exogenous substances in body fluids should also be expressed in SI units. Recommendations on this must await consultations with clinical pharmacologists, pharmacists, and others. This consultation must now be sought, and may lead to discussions on units for doses. Intravenous electrolytes are beginning to be prescribed on a mole basis.

In our view, the choice between expressing results as pH or as hydrogen ion concentration is a matter of scientific controversy, and not primarily concerned with SI units: the same applies to enzyme units.

Currently some laboratories report T_3 and T_4 measurements in terms of iodine (so that it can be related to PBI) and others in terms of the amino acid. As a working party on SI units we have no views on which is better, but the two are often confused. In listing thyroxine-iodine we do not recommend that this should be used in preference to thyroxine, but only that it should be clearly designated. We accept that this could be made clearer by adding (serum) thyroxine (total) to the table of components (mol wt 776.9: normal range 5-10 $\mu\text{g}/100\text{ ml}$; 60-130 nmol/l: (hospital values 1-20 $\mu\text{g}/100\text{ ml}$; 10-260 nmol/l): multiplication factor 12.87).

Cell counts (also applicable to microbiology)

We wish to recommend that cell counts in urine and in cerebrospinal fluid are

expressed per litre in the same manner as are haematological cell counts.

SI units in radiation measurement

At a recent meeting the International Committee on Weights and Measures decided to adopt special names for the SI units of absorbed dose and activity (of a radioactive source). These decisions are subject to ratification by the General Conference on Weights and Measures.

The new names are as follows:

Activity: the becquerel, symbol Bq

1 Bq = 1 s^{-1} = 2.70×10^{-9} Ci (3.7×10^{10} Bq = 1 Ci)

Absorbed dose: the gray, symbol Gy

1 Gy = 1 J kg^{-1} = 100 rad (10^{-2} J kg^{-1} = 1 rad)

It was also decided *not* to adopt a new name for the SI unit of exposure, C kg^{-1} (1 roentgen = $2.58 \times 10^{-4}\text{ C kg}^{-1}$). No decision was made on the continued use of the rem as the unit of dose equivalent.

D. N. BARON

P. M. G. BROUGHTON

M. COHEN

T. S. LANSLEY

S. M. LEWIS

AND N. K. SHINTON

Book reviews

Rheumatology. An Annual Review. Volume 5. Immunosuppression and Systemic Lupus Erythematosus. Edited by J. Rotstein. (Pp. xiii + 274; 11 figures + 1 colour plate. £16.70.) Basel, Munich, Paris, London, New York, Sydney: S. Karger A. G. 1974.

This review is in two parts. The first deals with an assessment of cytostatic drug therapy (immunosuppressive agents) in a number of 'autoimmune' diseases. The review puts into perspective the current standing of these powerful and potentially dangerous drugs. The facts which emerge are not reassuring, since doubts of their efficacy in a variety of conditions reviewed remain. The authors point out that this uncertain and unsatisfactory position has arisen from a lack of widespread use of accepted methods of clinical trial, with the exception of a few studies. They justifiably conclude that it is their opinion that this type of treatment has a potential, but this may not be realized if past trends for uncontrolled investigations continue. Valuable tables summarizing some of the better trials are presented, and will prove useful for the reader who wishes to acquaint himself with some of the results and references of the relevant work.

The review on systemic lupus erythematosus, in comparison to the book by Dr Dubois (also reviewed in this issue), is somewhat amateurish, but covers the important areas. The author is imaginative and provocative in his approach about the areas of contemporary research. Being quite short the review can be read quickly by anyone who wants to keep abreast of some of the conceptual developments in this field.

R. N. MAINI

Lupus Erythematosus 2nd ed. Edited by Edmund L. Dubois. (Pp. xv + 798; illustrated. \$36.00 + \$1.50 shipping in the USA; 6% sales tax for California residents.) Los Angeles, California: University of Southern California Press. 1974.

Modestly subtitled, 'A review of the current status of discoid and systemic lupus erythematosus', the contents of this book cover 800 pages, and are in fact, encyclopaedic. In this timely second

edition, advances in concepts of aetiology and pathogenesis and evaluation of recent therapeutic regimes are brought up to date. The reader seriously interested in this disease will note that there is an extensive bibliography of 3000 references, which should guide further reading in his own specific area of interest. He will also find that published evidence has been extensively used to substantiate the views presented in the book. An air of authority and cohesion is given by the editor, Dr Dubois, who has himself written a large part of the book and has a unique clinical experience of the disease (he has personally observed 520 cases of systemic lupus erythematosus (SLE) alone). Other chapters, all of them excellent, are written by workers actively engaged in laboratory and clinical work in the field of autoimmune disease. It is not surprising that much of the book focuses attention on abnormal immunological phenomena, which are a hallmark of these diseases. An evaluation of recent studies into autoantibodies directed against nuclear and cytoplasmic constituents and depressed cellular immunity are included. Some of the laboratory investigations of diagnostic value are presented in sufficient detail to allow an assessment of the techniques and their comparative value. There are good sections on pathology, including an excellent review on the renal changes. The importance of genetic and environmental factors in the aetiology of these diseases is critically and comprehensively examined. The contemporary work on the possible role of viruses is put in perspective. The evidence gained in understanding the disease from studies on experimental models, including the now famous New Zealand mice (and thus far less widely known) American dogs, is also up to date. The sections on the clinical features of the disease, the difficult areas of criteria for diagnosis, overlaps, and relationships between discoid lupus and SLE; rheumatoid arthritis and SLE; systemic sclerosis, mixed connective tissue disease, and SLE are highlighted. The reader is left with the impression, perhaps intended, that nosological entities remain to be defined more precisely, if they exist at all. There is a section on assessment of various therapeutic regimes, including a reappraisal of the present status of cytostatic drugs. The author, whilst giving steroids their due, is dubious about the evidence presented in support of cytostatic agents. A pamphlet titled 'Information for

patients with lupus erythematosus' is included as an appendix and is a valuable explanatory document. This book is an excellent documentary of a disease which has stimulated a great deal of contemporary research, and deserves a place on the shelf of all individuals interested in autoimmune diseases.

R. N. MAINI

Biological Effects of Asbestos: Proceedings of a Working Conference Held at the International Agency for Research on Cancer, Lyon, France, 2-6 October, 1972 (IARC Scientific Publications No. 8). Edited by P. Bogovski, J. C. Wilson, V. Timbrell, and J. C. Wagner. (Pp. xxi + 346; illustrated. Sw. fr. 80.-) Lyon: International Agency for Research on Cancer. 1973. Distributed for IARC by the World Health Organization, Geneva. Available through HMSO, London.

The published proceedings of many scientific meetings are of limited interest to the actual participants and even less so to the general reader. But the publications based on IARC conferences which have so far appeared are a signal exception and the most recent of the series maintains the high standards of its predecessors. The growing use of asbestos, the absence of obvious alternatives, and the grave health hazards associated with excessive exposure make this new book particularly welcome. Pathologists are likely to be most interested in the earlier sections where the various methods used to study the biological effects of asbestos are critically reviewed. The considerable limitations of existing procedures are clearly indicated - whether these apply to quantitative studies on fibres in the tissues assessed in the light microscope, or to qualitative investigations with the electron microscope, or to the continuing problems that surround the histological diagnosis of mesothelioma. The application of histochemistry here seems to be more limited than was originally hoped, but some newer procedures - particularly biochemistry and cytology of pleural fluids - look promising. More general topics follow such as techniques for sampling and identifying different kinds of asbestos fibres and the (decidedly conflicting) results that have accrued from experimental studies. There are several papers on the epidemiology of asbestosis and the neoplasms associated with exposure to the various forms of asbestos: the most disturbing finding is

the considerably increased risk of bronchogenic carcinoma among smokers who are concerned with the manufacture of asbestos products. The enhanced risk of gastrointestinal cancers remains a more open question. Final sections deal with the possible modes of carcinogenic action of asbestos fibres, and the paucity of experimental data is particularly striking. This is, then, a well edited and authoritative account which provides a valuable source of reference.

RICHARD CARTER

Guidelines for the Laboratory Diagnosis of Cholera. Prepared by the WHO Bacterial Diseases Unit (Pp. 23, Sw. fr. 58). Geneva: World Health Organization, 1974. Available through HMSO, London. Few bacteriologists in this country are familiar with *Vibrio cholerae*. They will welcome therefore the publication of this small booklet which deals concisely but very adequately with the bacteriological diagnosis of cholera. It includes a useful appendix of media and special techniques.

A list of corrigenda draws attention to errors in pages 12, 15, and 22.

W. J. JONES

Broadsheet 64

The information in the Journal states that these transparencies are to be obtained from Dr Roger Pugh at St Paul's Hospital. This is, in fact, no longer correct. Application should be made to Dr J. Burston, Department of Histopathology, Central Laboratory, St Mary's General Hospital, Milton Road, Portsmouth PO3 6AG