

as it contravenes the 1000-fold step. Fortunately for clinical workers, the litre and its subdivisions are permitted as a unit for volume as an alternative to the cubic metre (100 l.) and cubic millimetre ( $\mu\text{l}$ ) which are inconvenient for many purposes. In fact the litre was redefined in 1964 to be exactly 1 cubic decimetre ( $\text{dm}^3$ ) and not  $1.000028 \text{ dm}^3$  as it had been.

The present book puts forward the recommendation of various international bodies for the application of these principles to clinical biochemistry and haematology. The recommendations, intended to be universally adopted, are very clearly presented and discussed with examples. Many are immediately acceptable, being similar to current practice. Two areas call for comment. First, where possible, concentrations should be reported in mol/l. or subunits thereof, instead of the traditional wide range of units as: mg/100 ml, g% (w/v), p.p.m, m-equiv/l., M (molarity) and N (normality). Apart from standardization of units this also gives a clearer insight into the physiological and pathological implications of concentration. Thus the normal serum concentrations of urea, glucose, and cholesterol are all around 5 m mol/l. The second difficulty concerns enzymes. There is no SI unit for enzyme activity but the proposal of the IUB to designate one unit (U) as the transformation of 1  $\mu$  mole of substrate per minute is gaining ground. This book considers an alternative unit, the catal, which is essentially the conversion of 1 mole per second. There are difficulties enough in clinical enzymology units without this further unit, especially as there is ambiguity about which is recommended.

Internationally approved recommendations for the contents of a laboratory report are also made. These are the kind of system analysed (*eg*, serum), the component (*eg*, Na), and the kind of quantity (*eg*, molar concentration) followed by a figure and the unit (*eg*, m mol/l.). Details of arrangement are optional and a list of suggested abbreviations is given which would be useful for automatic data processing. Thus, serum-sodium, molar concentration = 142 m mol/l. would be recognized by many clinicians, but '(B) Ery-Haemoglobin (Fe), ams. (mean) = 2.0 fmoI' is calculated to bewilder the unwary physician requesting a mean corpuscular haemoglobin determination.

The acceptance of the approved recommendations, which are worthy of close study, will take time and would be eased if they were approved by editors of scientific and medical journals. Unfortunately the book is expensive and a shortened version of the recommendations would be a useful adjunct for wider study.

A. H. GOWENLOCK

HANDBOOK OF LABORATORY SAFETY Edited by N. V. Steere. (Pp. xii + 568; illustrated. £10 10s.) Oxford: Blackwell Scientific Publications. 1967.

Here we have at last a very comprehensive book on laboratory safety. The Editor, discussing responsibility, says that little, if any, time in chemistry courses is devoted to toxicology. This is only a very small part of the failure in responsibility. Very few laboratory workers in hospital laboratories have any idea of what the total hazard is. Many pathologists are well aware of the danger

of infection from pathological materials and from animal experimentation but few would be able to teach by precept or example the safety measures proposed as a minimum in this manual.

Simple injuries, fire, and hazardous wastes are well described and chapters are devoted to first aid for minor disasters including cardiopulmonary resuscitation measures. These should be taken out, classified into progressive procedures, and hung large on the walls of every laboratory. Perhaps our architects and laboratory planners should also read the vital chapter on shields and barricades and particularly on ventilation and exhaust systems. These are so often forgotten that working conditions even in newly built laboratories are conducive to accidents. Impossible temperatures and inner working rooms not air conditioned are all hazardous. Several chapters are devoted to the handling of chemicals which are flammable, explosive, or produce toxic vapours. Further advice is given on electrical safety, safe handling of isotopes, and dangers from glassware.

In the section on biological dangers there is a remarkable table showing the aerosols and the number of bacteriological colonies produced by them in 14 routine procedures such as centrifugation, in which 10 steps are separately assessed 100 consecutive times. Although the findings that the highest counts are found on decanting (apart from breakages) it is as well to see that each step in such a simple procedure has a hazard of aerosol contamination.

The book includes at the end 111 tabulated pages of the dangerous characteristics of 1,094 chemical substances.

This book is invaluable to any director of a laboratory or chief technical officer. Although not written primarily for the new laboratories it is very relevant to all aspects of our work.

Although sponsored by the Chemical Rubber Company in Cleveland it is handled by Blackwell Scientific Publications. It is certainly worth its price but would have a wider appeal if this could have been more reasonable.

A. GORDON SIGNY

PATHOLOGY OF RATS AND MICE Edited by F. J. C. Roe. (Pp. xxiii + 848; illustrated. £7 15s.) Oxford: Blackwell Scientific Publications Ltd. 1967.

A number of experts were invited by the Nuffield Foundation to contribute well illustrated papers on specified aspects of the spontaneous diseases of laboratory rats and mice. The papers presented at the conference (April 1966) are published in this volume, together with the abbreviated or summarized discussions on them. The work may be described as an advanced text on the special pathology of rats and mice. The presentation varies with the interests of the individual investigator.

All sections are clearly written and usefully illustrated. The sheer volume of information is impressive. Some chapters are reviews (*eg*, Russfield on the endocrine system, ovary and testis) whilst others tend to bibliography or the catalogue.

The discussion reports are clearly the victims of editorial scissors, but occasionally the liveliness of the original persists; there is a delightful argument, quite

including one on the antihypertensive function of the kidneys.

Anyone interested in either kidney function or structure, hypertension experimental or clinical, endocrinology, or cardiology should have a copy easily available. There are only 400 pages but the amount of objective information that covers them is staggering. For example, the whole complex subject of the control of renin release is dealt with in only seven pages. Nevertheless each facet of it is fairly and clearly presented. The baroreceptor theory, the macula densa theory, the evidence for renin release dependent upon sympathetic nerve activity, the hormonal control of renin release, the role of chronic sodium depletion or sodium loading, the adrenal steroid excess or deficit, are all discussed, dissected, and summarized so that the subject can be easily grasped.

It is an expensive book but worth it.

H. E. de WARDENER

CANCER OF THE GASTRO-INTESTINAL TRACT A collection of Papers presented at the 10th Annual Clinical Conference on Cancer, 1965, at the University of Texas M.D. Anderson Hospital and Tumour Institute, Houston, Texas. Chicago: Year Book Medical Publishers Inc. London: Lloyd-Luke (Medical Books) Ltd. 1967.

This collection of papers includes two reviews, one on functioning carcinoid tumours and the other on ulcerogenic tumours of the pancreas by Zollinger *et al*, that are of value but are too short and too broad in scope to be able to concentrate in depth. A more speculative paper on premalignant lesions of the stomach discusses the role of atrophic gastritis and, more briefly, the significance of intestinal metaplasia. Epidemiological evidence of the falling incidence of gastric carcinoma in Texas and the uncertain role of hereditary factors is presented, and Doll's statistical work in Britain, showing that chronic gastric ulcer and blood group factors are not of great significance in the genesis of carcinoma of the stomach, is vindicated by the experience of the Texas workers. Since the majority of the papers are concerned with clinical diagnosis and therapy, there is less of interest to pathologists in this volume than in previous issues in the series.

R. A. B. DRURY

#### CORRECTION

The correct title and editorship of the book reviewed by Dr Arnold Levene (*J. clin. Path.*, 21, 680) is *Pathology of Laboratory Rats and Mice*, edited by Ernest Cotchin and F. J. C. Roe.