

## Book reviews

**Mini-Computers in the Clinical Laboratory**  
 Edited by E. M. Knights. (Pp. xi + 113; illustrated; \$9.75). Springfield, Illinois: Charles C. Thomas. 1970.

**Automation and Data Processing in the Clinical Laboratory** Edited by G. M. Brittin and M. Werner. (Pp. x + 174; illustrated; \$13.50). Springfield, Illinois: Charles C. Thomas. 1970.

These books produced to the usual high standards of their publisher record the proceedings of symposia held in the USA early in 1969. Between them they record experience with a wide range of equipment used either to lessen the paper work of the laboratory or to mechanize bench procedure in the three main disciplines of clinical pathology.

The first book comprises a verbatim report of a seminar dealing with the medical applications of programmable calculators that was held in Southfield, Michigan. Following a realistic appraisal of the costs and difficulties of implementing the large time-shared or even small laboratory computer systems it is argued that there is much to be said for preparing for the future by familiarizing laboratory personnel with calculators having limited internal storage facilities. The Friden Model 1151, the Olivetti Underwood Programmer 101, and the Wang 300 and 370-380 Series calculators are described and their capabilities illustrated. Examples of their use in the field of clinical chemistry, microbiology, isotope work, and radiotherapy are given and serve to demonstrate not only how these instruments can improve laboratory procedure and lessen the chance of error, but also how valuable they can be for introducing concepts that are used in programming computers.

The second book gives an account of a more comprehensive symposium held at the University of California San Francisco Medical Center at which many well known American experts on laboratory automation were present. Reflecting a wide range of topics covered, the proceedings are divided into three sections: the first deals with data processing, the second with the evaluation of instruments used for mechanizing conventional chemical analyses, basic haematological procedures and antibiotic sensitivity tests, while the third is devoted to automated enzyme analyses. The data processing

section includes descriptions of well developed and impressive laboratory-based computer systems, using PDP8, Link Type, and IBM 1130 processors. Also included here is an account of an unfortunate experience of trying to meet the laboratories' needs via a terminal to a large computer. In section two, experience with a variety of automatic analysers is described and in many cases their performance is critically evaluated. The instruments reported on include the Technicon SMA 12/60, the Robot Chemist, the Beckman DSA 560 Analyzer, the DuPont Automatic Clinical Analyzer, the Hycel Mark 10 Discretionary Multiphase Analyzer, the Coulter Counter model S, and the IL Haemoglobinometer model 231. Such is the competition and engineering difficulties in this field that some of these reports are no longer of real interest as the equipment concerned is not available. The third section deals with the theoretical problems relating to the automation of enzyme assays but also describes some practical solutions.

These books include material that is not readily available elsewhere, although in Britain reports on the evaluation of certain items of equipment are available from the Department of Health and Social Security. Both can be read with profit by all those faced with the problem of what they should buy to automate their laboratory. The awful warning contained in the experience with a terminal to a large hospital computer should be compulsory reading for all those contemplating the early creation of a total hospital information system.

F. V. FLYNN

**The Biochemical and Physiological Function of the Platelets I and II Series Haematologica**, Vol. III, no. 4, 1970, and IV, no. 1, 1971. Edited by K. G. Jensen and Sven-Aage Killman. (Vol. III, pp. 129; Vol. IV, 185 pp. illustrated. Dan. Kr. 82.00 per volume). Copenhagen: Munksgaard Forlag. 1970, 1971.

These two issues of *Series Haematologica* contain the proceedings of an international symposium held in Chicago in October 1970. The subject matter of the 17 papers, all by experts in the field, ranges from platelet ultrastructure and the effects of aggregating agents upon it, to lipid metabolism, contractile proteins, and adenine nucleotides of the platelets. Most of the contributions represent new work rather than general reviews, and will

therefore be of greater value to specialists than to those seeking an introduction to the field. Their commendably rapid publication will enhance the value of these proceedings to all with a special interest in platelet function, to whom they can be confidently recommended.

R. M. HARDISTY

**Blood Coagulation Simplified** 2nd ed. By F. Nour-Eldin. (Pp. 196; illustrated. £2.00). London: Butterworth and Co. Ltd. 1971.

In his preface to this slim paperback the author expresses the hope that it may be of help to students and technicians taking the final examination in haematology. The contents appear to lose sight of this aim as the author repeatedly states that the presentations are 'personal'. Although there are useful tips, obtained from wide practical experience, students will need to refer elsewhere for a balanced presentation and the practical details required for their examinations. Nearly half the text references are in fact to the author's own material or prejudices.

It would have been better either to have enlarged and brought up to date the text of the techniques, or have eliminated the methods from the text, as few of the instructions are sufficient for the uninitiated and the source material is rarely acknowledged.

The section on management of haemophilia ignores the considerable progress made in recent years by the Oxford workers. Platelet adhesion and aggregation are not clearly differentiated and practical methods are not given. The part on lytic therapy is out of date. Defibrination and intravascular coagulation are confused and fibrin degradation products are not adequately described. In the control of anticoagulants there is no mention of the British system, the only reference being to the scheme of the Manchester group of hospitals. This scheme is dismissed on two false premises, one being that animal plasma is mistakenly used to control different batches of the reagent. As is well known this is only provided to hospitals in the direct supply and national reference schemes as a preliminary check on their technique. It forms no part of the quality control of production of the British Comparative Thromboplastin. Dr Nour-Eldin advocates a prothrombin ratio of 2½ times in the Quick test for therapy, without reference to the type of thromboplastin. This results in vastly