use of the limited facilities for isolation.

We are willing to learn from colleagues working in this difficult field but a well tested diagnostic technique should not be dismissed before a technical explanation for its failure has been thoroughly examined.

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## Bogus Branched-chain Aminoaciduria

Dip-inoculation methods are used increasingly to help in the diagnosis of urinary tract infections (Mackey and Sandys, 1965; Guttmann and Naylor, 1967; Mackay-Scollay, 1969; Jacobs, Woods, and Ramsden, 1972). In all these methods a nutrient culture medium is allowed to come into transient contact with freshly voided urine. The medium is then transported to the laboratory for bacteriological examination in one container, while the urine specimen itself may be sent to the laboratory in another for chemical examination. However, if contact of the urine with the nutrient medium is inadvertently prolonged, amino acid chromatography may give misleading results.

A urine specimen was received for amino acid chromatography from an infant at another hospital with feeding difficulties and failure to thrive. One-dimensional paper chromatography in butanol-acetic acid-water (Smith, 1969) showed an abnormal pattern with increased amounts of leucine and valine. However, no member of the laboratory staff was able to detect a maple syrup odour in the urine, and the dinitrophenylhydrazine test for alpha-keto-acids (Varley, 1967) was negative. The urine also contained lactose. It was then found that the urine had been transported in a bottle closed with the screw cap containing CLED medium in 1·5% agar from a 'dip-culture' bottle (Jacobs *et al*, 1972). The bromthymol blue in the culture medium had not caused a colour change because the urine was acid.

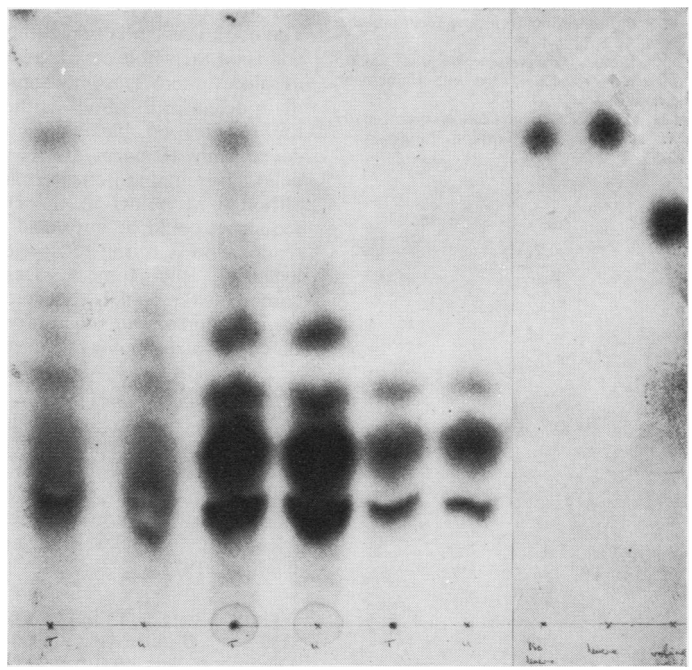

Fig *One-dimensional urine amino acid chromatograms of three normal urine specimens with (T) and without (U) overnight contact with a urine bottle screw cap containing CLED medium in 1·5% agar. The three markers are iso-leucine, leucine, and valine.*

Ten ml aliquots of three normal urines were allowed to stand overnight in inverted bottles closed with either a plain screw cap or a screw cap containing CLED medium in agar. The changes in the one-dimensional amino acid chromatograms are shown in the figure. Sugar

chromatograms showed the presence of lactose. Laboratory staff should be aware of this potential artefact.

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# Book reviews

**Analytical Atomic Absorption Spectrometry** By W. J. Price. (Pp. xii + 239; illustrated. £5·80.) Rheine and London: Gunter Heyden Ltd. 1972.

This book was written specifically for either the analytical chemist at his bench or the student of analytical chemistry. The author has arranged the material in the sequence he believed the analyst would wish to develop a knowledge of the subject. The introductory chapter deals mainly with fundamental definitions and the subsequent chapters cover 'Basic principles', 'Instrumental requirements', 'Analytical techniques', and 'Applications'. An appendix contains 'Sensitivities' and 'Details for individual elements'. The book is essentially practical in nature and is on the whole easy to read, although in places there is some confusion. The main defect in this book is the brevity of the chapter on basic principles which covers only 10 pages and is very superficial. The remaining chapters are adequate although at points in the chapters the sequences could be improved to help the reader who is trying to develop a knowledge of the subject. Despite these comments the book is to be recommended for inclusion among the library collections of chemical pathology departments.

M. R. WILLS

**Human Blood Coagulation, Haemostasis and Thrombosis.** Edited by Rosemary Biggs. (Pp. xxv + 697; illustrated. £7·50.) Oxford, London, Edinburgh & Melbourne: Blackwell Scientific Publications. 1972.

Nearly 20 years have elapsed since 'Human Blood Coagulation and its Disorders' was first published. During that time, 'Biggs and Macfarlane' has become established as a standard work of reference for all interested in the clotting of blood. Within the same period, many new discoveries have taken place and many new concepts have been propounded on the subject of blood coagulation and related topics.

The latest edition reflects the changes that have occurred in that the title is expanded to include haemostasis and thrombosis, and the chapters are written by 17 authorities. One is glad to find, however, that Professor MacFarlane and Dr Biggs are still present as authors and have made many valuable contributions to the book, and that Rosemary Biggs remains in overall editoral control.

The subject matter is dealt with in a clear and logical manner. The first part of the book covers the topic of coagulation and, after a superb introductory chapter by MacFarlane on the theory of blood coagulation, progresses via the various clotting factors and their activation to inhibitors of blood coagulation. Another excellent chapter by Professors Born and Hardisty on platelets is followed by one on abnormal clotting factors and a section on the more clinical aspects of coagulation factor deficiencies: clinical features, laboratory diagnosis, therapeutic materials available, and the management of patients.

The second part of the book is devoted to fibrinolysis and includes chapters on the fibrinolytic enzyme system, thrombolytic therapy, the defibrination syndrome and 'Arvin'. The subsequent section deals with thrombosis, anticoagulant therapy, and, in another fascinating chapter by MacFarlane, haemostasis. At the end of the book, there are very comprehensive appendices describing the various tests used in the investigation of coagulation disorders, including tests for fibrinolysis and platelet function.

This edition shows few of the defects of multiple authorship. It says much for all the authors that such a satisfactory state of affairs has come into being, since Dr Biggs admits in the Preface that she has kept editing to a minimum. There is a little, but insignificant, overlap between the chapters. The subject matter is almost always presented in a fair and unbiased manner. Some may disagree with the amount of space allotted to various topics. For example, a chapter on 'The contact system' receives 53 pages, whereas the whole subject of fibrinolysis (four chapters) comprises only 114 pages and thrombosis (three chapters) only 109 pages. This may signify a reluctance on the part of the authors to expand from pure coagulation theory into other fields. References also vary from chapter to chapter in their degree of topicality. However, one must confess that these are all minor criticisms.

The book is well produced. All diagrams are clear and the few plates