

Book Reviews

N. Selwood and A. Hedges
Transplantation Antigens
A Study in Serological Data Analysis
Wiley, Chichester 1978
VIII + 147 p., £9.50
ISBN 0-471-99657-2

The urgent need which arose to clarify the antigenic system of leucocytes has led to the collection of many data. This book is an attempt to simplify the description of methods which have been used to extract information from basic serological data. On more than 140 pages the authors describe the history and development of HLA-serology, the search for facts, methods of analysis, the development of a numerical approach to the specific problems of HLA-analysis and its application and speculate in the final chapter on the source of heterogeneity in serological results. Although the book is directed generally to serologists, anthropologists and geneticists may also be interested because the principles outlined are not exclusively related to experts in HLA-serology. The book is clearly written and will be very valuable for those workers experienced in the world of immunohaematology and mathematics.

S. Seidl, Frankfurt am Main

R. N. Barnett
Clinical Laboratory Statistics; 2nd ed.
Little, Brown, Boston 1979
XII + 237 pp.; US \$ 17.50
ISBN 0-316-08196-5

The 23 chapters of the text are divided into five parts: Principles of Statistical Analysis, Application of Statistics in the Clinical Laboratory, Applications of Statistics in Patient Care, Statistics for Manufacturers, and Statistics in Medical Literature. Appendix tables provide adequate information for interpreting F tests, t tests, 2 by 2 contingency tables for small series of values, and for computing confidence limits for standard deviation. The 2nd edition has been extended to include much new material (partially contributed by *J. M.*

Weisbrod): linear regression, normal values with reference to Gram-Charlier Analysis, Poisson distribution, quality control in hematology and other topics. All the specific applications are described by means of familiar laboratory examples. The authors succeed in bringing together both the medical laboratory and the statistical viewpoints. In this sense the book is recommended to the many persons who are intimately concerned with clinical laboratory problems and who require an understanding of statistics to help them cope with those problems.

M. Dozzi, Bern

G. Mathé, M. Seligman and M. Tubiana
Recent Results in Cancer Research
Vol. 64: Classification, Categorization,
Natural History
Springer, Berlin 1978
370 pp., 168 fig., 88 tab.; DM 88.-
ISBN 3-540-08830-X

'Lymphoid Neoplasias' was the subject of a CNRS International Colloquium which was held in Paris in June, 1977. Papers presented at that meeting have been published in volumes 64 and 65 (see below) of the renowned RRCR series. In this first part, contributions by an international group of specialists address themselves to the controversial problems of nomenclature and classification as well as to a series of interesting animal and clinical models of lymphoid neoplasia in a broader sense. A dozen each of presentations deal with morphological and/or immunological/cytochemical criteria, respectively, which are currently used in attempts at classifying non-Hodgkin lymphomatous states: fortunately, the chairmen of the first session contributed a 'conversion table' to facilitate comparisons between the five most widely used classifications (Rappaport, Lukes-Collins, Kiel, British Lymphoma Study Group and WHO). This volume offers an adequate picture of the state of affairs in 1977. It is of interest to note that overall there is more accord than discord in the definition of important disease entities within the group of lymphoid neoplasias.

M. Hess, Bern

G. Mathé, M. Seligman and M. Tubiana
Recent Results in Cancer Research
 Vol. 65: Clinical and Therapeutic Aspects
 Springer, Berlin 1978
 260 pp., 110 tab., 72 fig.; DM 60.–
 ISBN 3-540-08831-8

This companion volume to 'Lymphoid Neoplasias I' characteristically is less voluminous by 100 pages. In a first part, results of clinical and histological staging procedures in large series of juvenile and adult forms of non-Hodgkin lymphomas are presented. The relative value of staging appears to become appreciated after a 10-year period of experience with cases in adults, while extensive surgery in children proved rarely of value. As evident from the second part which deals with therapeutic aspects of the disease groups, clinical trial results are difficult to compare because of differing terminologies and differing definitions of response, duration and survival. It is urged that reporting of treatment results be standardized. For the time being therapeutic attempts do not reflect advanced histological and functional classifications but are based almost world-wide on the oldest and relatively simple scheme proposed originally by Rappaport. Combined efforts of European and American investigators should lead to an international consensus with eventual benefit for the patients.

Both volumes are of interest to pathologists, clinicians and oncologists. M. Hess, Bern

G. Stamatoyannopoulos and A. W. Nienhuis
 (eds.)

**Cellular and Molecular Regulation
 of Hemoglobin Switching**
 Grune & Stratton, New York, 1979
 792 pp.; US\$ 68.50
 ISBN 0-8089-1159-7

The book contains the proceedings of a conference held June 19-21, 1978, in Seattle, Wash. USA. The 51 contributions given by outstanding experts are divided in 3 parts entitled 'Developmental hemoglobins in man and animal models', 'Hemoglobin switching and erythroid cell differentiation' and 'Molecular biology of hemoglobin switching'.

The volume provides an excellent review of the present day's knowledge and is a most valuable source of information for laboratory investigators and clinical hematologists interested in this field of research. H. R. Marti, Araau

E. J. Freireich et al. (eds.)

Leukemia and Lymphoma
 Grune & Stratton, New York 1978
 X + 358 pp.; US \$ 24-50
 ISBN 0-8089-1166-X

This collection of 16 symposium articles in book form is divided into two sections. The first deals with immunologic aspects which range from experimental models through immunodeficiency and pathogenesis, immune aspects in viral-induced leukemias and lymphomas, cellular types and clones in regard to immunologic criteria, tumor-associated antigens and their reactivity, to immunotherapy of leukemia and lymphoma. The second section is somewhat more clinically oriented with the heading of 'Treatment, Diagnosis and Biology'. Here the approaches to treatment of the lymphomas, acute leukemias and chronic granulocytic leukemia and their results are presented. Also, chapters on the immunology of bone marrow transplants, chromosomal and cell culture studies, cell surface regulation of hematopoiesis, the viral etiology of this disease group and drug resistance in experimental therapeutic and kinetic models are to be found.

The authors are all very competent specialists in highly developed fields of research. Complete digestion of all the material presented is not always possible for the uninitiated without resort to more basic literature. However, with their ability to clearly present experimental data, theories and opinions, the authors provide the reader with an understanding of the achievements, problems, current limitations as well as future possibilities in these areas. Present concepts as to the etiology, pathophysiology and treatment of this disease group are well covered within the 357 pages. The abundance of unanswered questions also becomes very apparent. The basis for further studies and the direction of such endeavors are indicated.

This volume will certainly be of interest to hematologists and oncologists. R. Sonntag, Bern

H. von Voss

Präzisierung und Anwendung von Thrombozytenfunktionstesten in der Kinderheilkunde

Forschungsberichte des Landes

Nordrhein-Westfalen,

Heft 2788/Fachgruppe Medizin

Westdeutscher Verlag, Opladen 1979

VI – 174 pp., 34 fig., 41 tab., DM 29.–

H. von Voss, an experienced pediatric hematologist at Düsseldorf University, discusses special laboratory problems dealing with platelet function defects. He thoroughly explains in a very lucid style the criteria used in establishing the reliability of conventional platelet function tests (bleeding time, clot retraction, spreading, aggregation, re-entention tests and adhesiveness), as well as the newest methods now in use (e.g. malonyldialdehyde production of platelets). When examining newborns and infants for hemostatic disorders, the number of tests that can be performed is obviously limited by the amount of blood obtainable for such studies. However, the combination of reliable tests is vital since acquired and inherited disturbances of platelet function are often found to be the cause of severe bleeding complications. Even drug-induced bleeding complications can be expected in children (e.g. aspirin for rheumatic illnesses, ergenyl for epileptic seizures), as demonstrated in detail by the author.

To support his arguments, the author mentions the results of his own *in vitro* assays and indicates their normal range. In spite of numerous detailed data, the book, by and large, presents the various problems in a very clear and succinct manner, enabling the clinician to judge the methods and easily find answers to specific questions. The book can be recommended to all physicians performing laboratory research, especially in pediatric hemostaseology. Scientists working in the field of platelet abnormalities may find the book interesting because of its excellent review of the current literature.

E. Wenzel, Homburg

S. L. Lamberg and R. Rothstein (eds.)

Hematology and Urinalysis.

Functional Medical Laboratory Technology

AVI, Wesport 1978

VIII + 174 pp.; US \$ 11.–

ISBN 0-87055-268-6

This 174-page laboratory manual introduces students in medical technology to commonly performed basic hematology tests and urinalysis. The manual is unique in that it describes and depicts step by step the performance of the most important simple tests. 25 pages alone are devoted to the detailed description of the methodologies of blood collection by venipuncture and by fingertip puncture. The numerous illustrations are instructive and useful, procedures are simply and well described. For each procedure there is an extensive discussion of the theoretical aspects and of possible errors. Each chapter is followed by a section of programmed questions. The concept of such a manual is an excellent one and the reader realizes at once that the authors are experienced teachers of medical technology students.

Unfortunately, the authors have not taken the precaution to have their manuscript reviewed by a competent hematologist and biochemist. The manual abounds with obsolete dogmas, inaccurate expressions and outright wrong statements. Some of the obsolete methods described, such as the fingertip puncture bleeding time should be replaced by currently used tests (Ivy or Template bleeding time). Since the authors discuss modern mean corpuscular values it is redundant to waste 3 pages on obsolete erythrocyte indexes and beyond that to illustrate erythrocytes with a colour index of 0.1 (sic!). Before I could ever recommend this manual to students, dozens of wrong statements would have to be corrected in a second edition. I mention just a few: oxalate is said to be a chelating agent (p. 29); cosin, an acid stain is said to dissociate too much at a more acidic pH (the contrary is correct, p. 55); we are told that the number of lobes of the polynuclear neutrophil varies with the age of the cell (p. 59); that an increased viscosity of the plasma decreases erythrocyte sedimentation rate (compare that to multiple myeloma where it is high and DIC where it is zero, p. 98); states with increased serum albumin leading to diminished sedimentation rate do not exist in human pathology (p. 107); it is extremely poor technique to use the Rees-Ecker platelet count with a multiplication factor of 10^4 —what about the patients with thrombocytopenia? (p. 108); it is incorrect that platelets are included in the red cell count when using Coulter counters, but that this does not matter (thrombocytopenia? p. 128); hyperchromic red cells do not exist (p. 140); myoglobin is not a hemo-

globin derivative (p.144); overleighted (lighter than water) toluene is said to increase specific gravity of urine; normal specific gravity (of urine) does not equal isosthenuria. In addition, awkward statements such as: 'urine is the most significant way of elimination of ... substances of cellular metabolism produced in excess, such as water and electrolytes' and 'the increase in specific gravity is not the same for every kind of solute, as some solutes are ionized and others are not' would have to be properly formulated. The example given on quality control concerning the hemoglobin determination is outrageous. The standard globintrol is said to contain 15 g/100 ml, with a standard deviation of 5 g/100 ml (!). The authors appear to be content if the daily checks of the globintrol standard fall within 13–18 g/100 ml and state: 'values are well within normal control limits as they cluster around the mean'. When the globintrol standard of 15 g/100 ml yields a value of 7 g/100 ml in the authors' example, they state: 'values are in normal range but fluctuate'. I would fire a medical technologist who produces such a quality control chart without immediately alarming his superiors.

F. Bachmann

B. Blombäck and L. Å. Hanson (eds.)

Plasma Proteins

Wiley, Chichester 1979

XVI + 401 pp.; US \$ 22.50

ISBN 0-471-99730-7

This volume contains contributions on the structure and function of plasma proteins by 23

authors. The book is an updated translation of the original 1976 Swedish edition by *AB Kabi*. It is evidently a Swedish book on plasma proteins reflecting particularly the outstanding contributions of Swedish investigators in this field. The review on the history of plasma protein chemistry is followed by a description of the *Kabi* (and other) industrial plasma fractionation methods. The chapter on transport proteins provides information on albumin, lipoproteins, ceruloplasmin, transferrin, haptoglobin, hemopexin, transcobalamin, retinol-binding protein, transcortin and proteins binding thyroid hormones. An extensive section on immunoglobulins includes also immunological diseases, transplantation and blood group serology. Of the coagulation factors, fibrinogen and thrombin received the most attention. In addition, a survey is given of the methods used for assay and characterization of plasma proteins as well as of their diagnostic use.

The content and the form of the individual chapters are quite unbalanced. The chapters on immunoglobulins, methods and clinical applications are very readable texts for the student, whereas others, especially descriptions of transport proteins and coagulation factors, are rather comprehensive reviews of recent work (up to 1977) for the expert in the respective fields. Unfortunately, the references, added at the end of the book, are sometimes quite confusing and inappropriate. For example, 6 references mentioned in the chapter on AHF are missing in the reference list while, of those listed, only 4 out of 18 are referred to in the text.

M. Furlan, Berne