

Book Reviews

Brewer, J.: The red cell sixth ann arbor conference. 608 pages – Liss, Inc. New York, 1984. £ 66.00

The Sixth International Conference on Red Cell Metabolism and Function (October 1983) and the Proceedings (1984) were dedicated to Dr. Hermann Lehmann, who deceased on July 12, 1985. The dedication, excellently composed, was delivered by Dr. Huntsman. The number and quality of the contributions demonstrate how attractive the red cell still is for stimulating and interdisciplinary research work. The book consists of six sections, all including formal papers and informal discussions. The first two sections deal with normal and abnormal hemoglobins and with hemoglobinopathies. Subunit assembly for formation of stable heterotetramers and various studies on red cells in sickle cell anemia are discussed. Dr. Lehmann's excellent "mini-review" on the gradual understanding of thalassemias includes historical details and new data on molecular genetics. The next sections contain several papers on new thrusts in blood substitutes and blood replacements, as well as on various aspects of red cell metabolism. The fifth section concerns interactions between the red cell and malaria parasites; a "mini-review" focuses on the protective function of red cells in malarial infection. The last section covers structure and function of the red cell membranes. At least, it is worth while reading the abstracts and posters showing a broad spectrum of work and some sophisticated experimental data.

The book informs about the recent state of red cell research. A new feature of the conference is the use of "mini-reviews". The proceedings will be valuable not only to hematologists but to all scientists using the red cell as an object for research work.

E. Kleihauer, Ulm

Hofmann, V., Berens, M. E., Martz, G. (Eds.): Predictive drug testing on human tumor cells. Recent Results in Cancer Research. Vol. 94. 107 tables, 87 figs., 285 pages – Springer, Berlin Heidelberg New York Tokyo, 1984. DM 98,- / US \$ 35.70

This volume covers 30 papers presented at the international conference on "Predictive Drug Testing on Human Tumor Cells" in Zurich, 1983. It is noteworthy that 14 of those articles were presented or at least co-authored by Swiss investigators. This reflects the immense working power of the small group of engaged scientists headed by Victor Hofmann. Although the title of this volume refers to predictive drug testing in general, particular emphasis is placed on the clonogenic assay. The comprehensive information presented on this topic is still valid at the present. Amongst other interesting contributions, the volume includes articles by leading personalities in the field, e. g., by Sydney Salmon, one of the pioneers of the clinical application of the clonogenic assay and by Victor Courtenay, who is renowned for his refinement of the methodology. These and other papers also point out several methodological, theoretical, and practical limitations of the clonogenic assay. Some of the more critical authors of this volume express their doubt whether these tests are suitable yet for a wide-spread clinical use or for commercial marketing. After reading this volume, the reader should be able to form his own opinion on predictive drug testing. Maybe, he will ask himself whether – at this stage – careful studies in specialized laboratories on the biology of in vitro tumor growth might not promise more success than the current massive clinical exploitation of a clonogenic assay with little or no benefit to the patients. A minor part of the volume deals with non-clonogenic assays, especially with precursor-incorporation tests. In spite of the advantages of their relative technical simplicity and the availability of test results within a few hours, several problems prevent their wide-spread application in the clinical setting. Unfortunately, these shortcomings are only partly delineated in the chapter. In summary, "Predictive Drug Testing on Human Tumor Cells" offers an excellent review on the theoretical and clinical aspects of the clonogenic assay and some information on nonclonogenic test systems. For people working in the field, it has to be considered essential reading, but it also can be strongly recommended for all clinicians involved in therapy with cytostatic drugs.

H. Ludwig, Wien

Miller, D. R. et al.: Blood diseases of infancy and childhood. Blackwell Scientific Publications Osney Mead, Oxford.

The book "Blood diseases of infancy and childhood", the first 3 editions of which were written by the American pediatric hematologist Carl H. Smith, now appears for the second time in a limited multiauthorship edition by the pediatric hematologist and oncologist D. R. Miller. The book is divided in three major sections: red cells, white cells, and coagulation. Malignant solid tumors and immune deficiency disorders are excluded. The large chapter on hematologic malignancies (100 out of 900 pages) deals with leukemias and lymphomas. The chapter on acute lymphoblastic leukemia has been completely rewritten on a high level by Linda Miller. It shows the new understanding of the biologic heterogeneity and the advances in the therapy of this disease. There are references up to 1983 including the results of the German therapy studies. The chapter is followed by two very useful chapters on treatment of complications of leukemia and metabolic complications of leukemia and lymphoma. Miller's textbook directly competes with "Hematology of infancy and childhood" by Nathan and Oski, the second edition of which appeared in 1981. Whereas Miller's textbook is probably more comprehensive, the two volumed Nathan and Oski may be clearer and more readable. However, the specialist in this field should have both textbooks on his bookshelf.

J. Ritter, Münster

Kennett, Roger H. et al.: Monoclonal antibodies and functional cell lines. 426 pages. — Plenum Press, New York and London 1984. \$ 49.50

This book deals with a variety of applications of monoclonal antibodies in biology and medicine including diagnostic and clinical approaches. The authors need to be congratulated for the fact that they chose in a selective rather than comprehensive way the topics that illustrate the contributions monoclonal antibodies have made to biomedical sciences. The contributors to this book comprise members of research institutes, university departments, and industrial companies. The fine structure of the acetylcholine receptor molecular complex has been elucidated by monoclonal antibodies against the purified receptor and two binding sites with different affinities for alpha-bungarotoxin have been defined (Richman). Monoclonal antibodies have been used to relate aminoacid changes to changes in antigenic sites on parasites. They provide information on the structure and biology of microorganisms and tools for purification of antigens for vaccine development (Philipps and Zodda). Additional applications appear promising such as the analysis of idiotype anti-idiotypic networks, engineering of cloned variants, sero-epidemiology, targeted chemotherapy, and molecular probing of genomes. Furthermore, monoclonal antibodies appear to be able to recognize differences of enzymes of different tissue origin (Harris). Monoclonal antibodies to the cytoskeleton allow the localization of subcellular components under various functional conditions, and their microinjection into living cells which induce perturbations of the cellular function allows study of the functional role of these structures (Lin et al.). An interesting chapter is dealing with the influence of monoclonal antibodies on the cell surface adhesion function, which provides insight into cell to cell interactions (Horwitz et al.). For those interested in practical medicine, screening tests for neoplasias such as prostatic cancer, neuroblastoma and leukemia are described. First results of clinical trials with monoclonal antibodies in poorly differentiated lymphocytic lymphoma, cutaneous T-cell lymphoma, chronic lymphocytic leukemia, and acute leukemia are reported (Levy et al., Berthold).

The final section of this volume discusses aspects of biotechnology and the production of T-cell lines for the analysis of lymphokines. The relationship between monoclonal antibodies and techniques of molecular genetics have been outlined with special emphasis on the molecular events taking place during oncogenic transformation (Kennett et al.). In an Appendix methods are included for the production and characterization of monoclonal antibodies and continuous cell lines. Unfortunately the index is not very helpful for finding the appropriate key words. In summary, this book is of high value both for those actively working in the field and for the readers seeking information on the hot spots of monoclonal antibody research.

A.-D. Flad, Borstel

Jean Henri Dunant: Der gefäßchirurgische Patient. 139 pages, 65 figs, 7 tables. Verlag Hans Huber AG, 3000 Bern 9, 1985. Fr. 38 / DM 44

The increasing role of arterial and venous vessel disease in medical practice caused the coworkers of the physicians to look for a guide for the care of these patients. This booklet presents a short overview of the main topics of this field. Different diagnostic methods, indications and operative procedures are described. Due to the arrangement of the text and drawings showing operative methods the book has for didactic purpose an excellent structure. The topics are presented in a clear and descriptive manner. Pre- and postoperative care are taken into special consideration. The group of interest, consisting of different physicians and nurses, can acquire basic information by studying this booklet. The dimensions of the booklet don't allow complete and detailed information. Because of the price of the book the number sold will be limited, but it seems acceptable. Nevertheless the reviewer recommends it to all engaged in vessel disease.

H. Scheld, Giessen

Remmele, W.: Pathologie 1. Rechtsfragen in der Pathologie (Legal Questions in Pathology). Einführung in die bioptische Diagnostik. Herz und Gefäßsystem. Hämatologie. Atmungsorgane. Ein Lehr- und Nachschlagebuch. 906 Seiten mit 234 Abbildungen in 771 Einzeldarstellungen und 106 Tabellen. Springer-Verlag, Berlin Heidelberg New York Tokyo 1984.

The first volume of this four-volume textbook and reference work contains, among other things, a section on hematology. The chapters are entitled: "Erythropoiesis" (W. Remmele), "Leuko-poesis and myeloproliferative diseases" (H. E. Schaefer), "Disturbances in hemostasis" (T. Eckart, Th. Schöndorf, H. G. Lasch), "Spleen" (H. J. Stutte), "Lymph nodes (R. Fischer), and "Thymus" (H. F. Otto). The description of individual diseases is not restricted to macro-pathological, histological, and cytological findings, but deals extensively with epidemiology, etiopathogenesis, course, and prognosis. In addition, currently valid treatment principles are briefly summarized. Without pretending to be comprehensive, important changes are demonstrated paradigmatically in black-white figures usually of good quality.

The fact that individual chapters have been written by different authors means, on the one hand, that there is a certain amount of overlap (e. g., the description of hairy-cell leukemia under myeloproliferative diseases and under non-Hodgkin lymphomas); on the other hand, diseases that belong together biologically and clinically are separated (e. g., description of different phenotypes of the chronic myeloproliferative syndrome in three chapters). Certain diseases are either not dealt with or there is not enough detail: e. g. Fanconi anemia, which is only briefly mentioned under thrombopenias (and which is moreover falsely described as Fanconi syndrome, just as it is in the table reviewing pancytopenias); the not classifiable chronic myeloproliferative syndromes; the group of myelodysplasias. The disadvantage of having chapters by different authors is compensated for by the fact that each chapter was written by a real expert in that particular subject. As a result, a remarkably high standard has been achieved and the presentation is extremely up to date for even aspects that lie beyond the real work of the pathologist. There is an extensive list of references for each group of areas that belong together; however, in my opinion, these lists include too many outdated works that are only important for an understanding of the historical development, while some important new clinical reviews are missing.

As far as I can tell, from the chapters discussed here, the work is valuable for the pathologist as well as for the clinician. It provides the pathologist with the important epidemiological and clinical data he requires for an understanding of the changes he observes; it helps the clinician to incorporate the histopathological findings in his understanding of disease. This work is therefore, at least in the chapters discussed here, a very successful attempt at furthering understanding between important medical disciplines.

H. Heimpel