
This book is a record of the proceedings of the Second International Conference on Medical Electronics, and consists of a series of papers on electrophysiological techniques, electroencephalography, cardiology, manometry and flow measurement, acoustic techniques, automation in medicine, radiology and isotopes, and chemical instrumentation. Some of the papers are in French, the majority are in English. It is probable that the clinical pathologist will find the book of most interest because of the ideas it stimulates. An application of mathematics to medical diagnosis was developed some years ago by Sir Ronald Fisher with his discriminatory functions, and the possibility of further work in the field of mathematical diagnosis emerges from the papers of Lusted and Ledley on electronic computer aids to medical diagnosis and of Bishop on failure indicators. In a somewhat different field the paper of Perkins and Piper on an analogue computer for protein metabolism analysis and of Tass on simulation of renal functions on a digital computer brings out the possibilities of simulating biological systems by electronic computers and thereby forecasting results which can be used to determine useful pharmacological activities or to plan experiments. Of more immediate value in the hospital laboratory is the paper by Schwalbe on pulsed field electrophoresis.

A. DICK


It is probable that the human placenta occupies an important position in determining the nature of ante-natal and post-natal life; research on the placenta and foetal membranes has not, until recently, received the attention it rightly deserves. This book, well edited by Claude Villee, will be found most stimulating and invaluable for reference by those interested in this field.

The subject matter is divided into four parts: (1) eight reviews on varying aspects of placental function, (2) the proceedings of a conference held in 1958, (3) a bibliography of the literature, and (4) a list of current research. The first review by E. C. Amoroso deals with the hormonal functions of the placenta in humans and animals, while in the second by E. W. Dempsey the histo-physical considerations are dealt with briefly and the value of certain radio-opaque colloids and of fluorescence techniques described. The placental circulation by Elizabeth Ramaay and the placenta as the foetal lung by D. Barron are adequately handled. The former can be particularly commended and the interesting relationship between toxaemia of pregnancy and site of implantation is cited. The transmission of antibodies from mother to foetus by F. Brambell and W. Hamming is topical and accurate. Further brief reviews on placental function and foetal nutrition, with biochemical and pathological aspects, complete part I.

The second part, which covers 114 pages, deals with the proceedings of a conference held in 1958, under the auspices of the Association for the Aid of Crippled Children. At this conference practically every aspect of the placenta and foetal membranes was presented and discussed.

In part III a very adequate bibliography from 1946 to 1958 of nearly 3,000 references is given and in many of these a brief description of the content is included. The final part lists only some of the American and other investigators participating in current research.

While this book is perhaps of limited appeal it is well edited and can be highly commended to obstetricians, paediatricians, or pathologists, and should serve as a stimulus for further research.

A. DICK

CELL PHYSIOLOGY OF NEOPLASIA (Pp. 653. $10.50.) Published for the University of Texas M.D. Anderson Hospital and Tumor Institute (University of Texas Press, Austin). 1960.

For the specialist in cancer research, this collection of bulky papers with their associated discussions will no doubt prove to be provocative and time-saving. The general reader’s admiration can hardly fail to be aroused by such a display of erudition though, like the reviewer, he will sigh for the good, old-fashioned abstract that has played so important a part in the past in making the advances of science palatable and inspiring. (Perhaps it might be a good thing to dilute specialist audiences with a proper leavening of ordinary folk not afraid of coughing, shuffling their feet, and even making coarse remarks when the expert gets out of hand.)

Be that as it may, this volume from the University of Texas gives us something to think about, even though its main theme is directed mainly towards nuclear mechanisms that drive the malignant cell headlong in its unguided invasion of the tissues and says little about what is happening to the cell machinery. Clinical pathologists will enjoy reading Koller’s sane remarks on chromosome behaviour in neoplasia, Michael Watson’s intriguing account of the nuclear membrane, Dmochowski’s latest instalment on viral bodies in neoplastic cells, Novikoff’s gallant attempt at localizing enzymes in the tumour cell (he deserves a special word of praise for his figures 35 and 36) and Beck’s readable survey of ribonucleotides and ribonucleic acids. Others can be assured of