Methoden in der medizinischen Cytogenetik.

Now that human cytogenetics has become a practical technique for the diagnosis of certain congenital abnormalities, there will clearly be a demand for authoritative texts on its methodology. The rapid development of the subject, which came into existence just 10 years ago, poses a number of problems in the concept and arrangement of this type of book. Not only is the demarcation line between practical techniques and theory less definite than in more established disciplines, but sometimes the techniques themselves are still in the process of development. The authors of this book have met the first difficulty by including a considerable proportion of theory; while their general reluctance to state their preference when describing alternative techniques may reflect the second problem.

There are 8 chapters. The first, by R. A. Pfeiffer, is on the culture of blood and bone-marrow cells. There can be no doubt that cells of the peripheral blood are the tissue of choice for the large majority of workers in medical cytogenetics. It seems strange, therefore, that the book begins with the bone-marrow technique, which today is only rarely used for the analysis of chromosomes, except in cases of suspected myeloid leukaemia. Moreover, on page 3, the possibility of giving colcemid to the patient is mentioned, which is surely no longer regarded as justifiable. The rest of the chapter contains useful descriptions of the various techniques of culturing leucocytes, but there is no mention of the advantages and limitations of different methods.

A special chapter, by H. G. Schwarztarcher, is devoted to the preparation of mitotic chromosomes from different tissues. Long-term culture techniques from skin biopsies and other explants are the subject of the third chapter, by U. Wolf. This is a useful compilation of the techniques for explanting and subculturing, even though it requires to be supplemented by other books on general tissue culture techniques. A chapter on autoradiography with tritiated thymidine, by W. Grey, describes the theoretical aspects of thymidine incorporation as well as technical aspects. Since this is primarily a practical handbook, I would have liked to see a little more space devoted to the subject of safety precautions.

The longest chapter is on the analysis of the human karyotype, by E. Passarge. This contains detailed descriptions, as well as photomicrographs, of normal human chromosomes, so-called normal variants, and some abnormalities. There are further descriptions on the autoradiographic behaviour of individual chromosomes, and the nomenclature agreed on by the Chicago Conference is given in some detail.

A chapter by S. Ohno describes techniques for the preparation of meiotic chromosomes in males and females, though not on the way the material is obtained. While its practical application is probably limited, this contribution makes interesting reading on meiosis in general. There are no photomicrographs, only some complicated diagrams on translocations and insertions.

The two concluding chapters are eminently practical. That on sex chromatin (Barr bodies) is by Schwarztarcher, while drumsticks are dealt with by M. Tolsdorf. There are some good photographs of positive, as well as of unsuitable, cells.

This book contains a large amount of information within a convenient format; while its shortcomings, by pointing out present-day difficulties, will surely benefit future books on the subject.

Ursula Mittwoch


It is a tribute to the development of medical (or clinical) genetics that a second journal in English on this subject has now appeared, entitled Clinical Genetics published by Munksgaard of Copenhagen with three joint Editors, one each from Norway, Sweden, and Denmark.

There have for some time been three general human genetic journals published in English—the Annals of Human Genetics, The American Journal of Human Genetics, and Human Heredity—each of which include some material of interest to clinicians. The Journal of Medical Genetics started in 1964 in London was the first to be devoted almost entirely to the clinical aspects and it is now joined by the new journal. The first number contains a review article on the value of cell culture in the investigation and management of clinical genetic disorders and a review article on abnormalities of the human sex chromosomes, as well as original articles on cellular metachromasia, a new caeruloplasmin variant, the sex differences in alcohol metabolism, and a study of immunization to IgA in transfusion and pregnancy.

The contributors to this first number are all working in the United States, and it is to be hoped that some of