Book reviews

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Chromosomal Variation in Man: A Catalog of Chromosomal Variants and Anomalies

4th edition. Edited by Digamber S Borgaonkar. (Pp 1002; £72.00.) New York: Alan R Liss. 1984.

The fourth edition of *Chromosomal Variation in Man* was published in 1984, but has only recently been received by the Journal. This edition, like the previous three versions, is a compilation of published reports of chromosome abnormalities. It is arranged into three sections, the first and largest of which is entitled Structural Variation and Anomalies. In this section over 3000 reports are listed ranging from the reciprocal translocations involving chromosomes 1, 2, 5, and 7 with microcephaly and retardation, to a variable sub-band Yq121 associated with 800 monosomies, trisomies, triploidies, and tetraploidies, with a third shorter section covering chromosome breakage syndromes such as ataxia-telangiectasia and xeroderma pigmentosum. There are two appendices; the first, which reports loci assigned to chromosomes, is largely unnecessary as a more comprehensive list is available from the Human Gene Mapping Conference Reports. In the second appendix, chromosomal syndromes are described with illustrations for partial aneuploidies of each chromosome arm. A few selective references are given in each case to help locate published sources.

Generally, the catalogue is well set out. The reports are ordered on the basis of chromosome number and region involved in the abnormality, with references given in full. Where cell lines are available from the Mutant Cell Repository in Camden, USA, the appropriate GM reference number is listed. In my experience, authors of reports cited in the catalogue often have cell lines frozen down in their laboratories or are prepared to resample interesting cases if asked to do so. Consequently, this book should be of value to anyone interested in making somatic cell hybrids for gene mapping as well as to all cytogenetic laboratories. Together with the *Repository of Chromosomal Variations and Anomalies* (a similar publication in which karyotypic data has been personally communicated to Dr Borgaonkar), this catalogue represents an unrivalled reference source. In view of the ever increasing number of chromosome anomalies being reported, however, and the three to four year

interval between previous editions of this catalogue, I would be surprised if the fifth edition is not well on the way to completion.

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Monitoring of Occupational Genotoxics

Progress in Clinical and Biological Research Vol 207. Edited by Marja Sorsa and Hannu Norppa. (Pp 266; figures+tables. £30.00.) New York: Alan R Liss. 1986.

A significant number of industrial chemicals have been shown to be mutagenic and potentially carcinogenic in short term laboratory test systems. Such demonstrations of genotoxic activity raise the question as to whether occupational exposure results in mutagenic damage and whether such damage represents an early indicator of increased risks of cancer and long term inherited defects.

In spite of the very considerable progress that has been made in identifying hazardous environmental agents (both chemicals and radiations) at the laboratory level, the development of appropriate technologies for monitoring exposure has received an inadequate amount of attention. It is particularly appropriate that it was in Finland, whose scientists have made significant contributions to monitoring research, that a symposium was organised to evaluate the available technologies.

This small book contains a series of papers presented at a symposium in Helsinki in July 1985, which was aimed at illustrating the present status of the technology currently used and being developed for monitoring and assessing the hazards of occupational exposure to genotoxic agents. The editors have collected together a comprehensive list of workers in the field who have reviewed their own current work and provided useful indicators for future developments.

The monitoring of occupational exposure to agents capable of inducing genetic damage can be undertaken at a number of levels, which range from (1) the identification of specific lesions in the DNA itself or in other molecules, such as haemoglobin; (2) the detection of point and chromosomal mutations in various cell types, which at the moment is confined to circulating blood cells; and (3) the identification of changes in the characteristics of such differentiated cells as the sperm.