

Chromosome Techniques - A Manual

Arun Kumar Sharma and Archana Sharma

This manual brings together nearly every technique used in the analysis of chromosomes. It is the first of its kind to do so in such a comprehensive manner and covers protocols for chromosome analysis from plants, animals and man, along with their theoretical principles. Its scope ranges from the simple techniques of fixation, staining and microscopy to the latest, most sophisticated techniques, including cytofluorometry, autoradiography, isolation and extraction of nuclei and chromosomes, microdissection and *in situ* molecular hybridization. The identification of chromosome segments at cellular, ultrastructural and molecular level is a special feature of the manual and, the inclusion of both generalised and specialized techniques makes this manual exceptionally useful to both researchers and students.

As a desk manual, it will cater for the needs of all biologists interested in genetic toxicology and chromosome study, including agricultural and horticultural workers as well as cytogeneticists, haematologists and other medical scientists interested in genetic analysis and gene mapping at the chromosome level.

About the Authors

Arun Kumar Sharma is professor at the Centre for Advanced Study in Cell and Chromosome Research at the University of Calcutta. He has been president of the Indian Botanical Society (1980), the Indian Science Congress (1980-81), the Indian National Science Academy (1983-84) and founding president of the Federation of Asian Scientific Academies and Societies (1984-date). A former Golden Jubilee Research Professor of the Indian National Science Academy, he has pioneered many techniques for studies of the physical and chemical nature of chromosomes, the most recent being orcin binding for repetitive DNA sequences.

Archana Sharma is professor of genetics at the Centre for Advanced Study in Cell and Chromosome Research at the University of Calcutta. She held the positions of general president of both the Indian Science Congress Association in 1986-87 and of the Indian Botanical Society in 1989.

Arun Kumar and Archana Sharma are joint editors of the international journal *The Nucleus* and have received numerous awards for their work in cell biology.



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