About the Book

The volume is the first of the series on *Lower Groups* covering representatives of algae, fungi, lichens and bryophytes. Perspectives of different lineages in red algae as analysed by molecular studies, form the initial article. Discourses on fungi include genome evolution and analysis in yeast, molecular studies and genetic diversity in *Petosphaerium* complex of crucifers and trends of evolution in Powdery Mildew, the Ascomycete. In Basidiomycete the oyster mushroom genome analysis to delineate lineages and in different fungal groups including oomycetes, the use of EST sequences in comparative genomics have been highlighted. The origin and evolution of lichens, evolution of sex determining sequences in liverworts, use of gene knockout in comparative genomics in moss *Physcomitrella* and finally organelle genome as affected by nuclear gene transfer and discrepant evolution comprise the most up-to-date and basic studies on lower groups. The volume provides a state-of-the-art on genome studies of some lower groups and will be of benefit to any student or researcher interested in the origin of diverse plant groups, genome and evolution.

About the Editors

Professor Arun Kumar Sharma FNA, FNASc, FASc, FTWAS, is Honorary Professor of the Centre of Advanced Study on Cell and Chromosome Research, University of Calcutta. He has been General President of the Indian Science Congress Association (1980-81), the Indian National Science Academy, New Delhi (1983-84) and the Indian Botanical Society (1980) and is Founding President of the Federation of Asian Scientific Academies and Societies. Formerly Golden Jubilee Research Professor of the Indian National Science Academy, he has pioneered many techniques for the study of the physical and chemical nature of chromosomes. He has developed new techniques for studying chromosome structure and is well known for establishment of a new concept of speciation in vegetatively reproducing plants and has received numerous awards.

Professor Archana Sharma, FNA, FASc, FNASc, Honorary Scientist (INSA) and former Head, Department of Botany, University of Calcutta is internationally known for her pioneering contributions on Chromosome Techniques, Environmental Mutagenesis and Genetic Toxicology. She has received numerous awards and was General President, Indian Science Congress Association (1986-87) and President of the Indian Botanical Society (1989) and also Biology Section of the National Academy of Sciences.

Their numerous contributions include authorship/editorship of several books—*Chromosome Techniques* (Butterworths, 1965, 1972, 1980); *Chromosomes in Evolution* Pt. I & II (CRC Press, 1983, 1984), *Chromosome Technique—A Manual* (Harwood Academic, 1994), *Plant Chromosomes: analysis, manipulation and engineering* (Harwood Academic, 1999); and *Chromosome Painting* (Kluwer Academic, 2001).

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