

Nicolini, C. (ed.): **Genome Structure and Function. From Chromosomes Characterization to Genes Technology.** (NATO ASI 3. High Technology-Volume 31). - Kluwer Academic Publishers, Dordrecht - Boston - London, 1997. 331 pp. NLG 275.00, US \$ 170.00. ISBN 0-7923-4565-7.

Over the past years it has become apparent that understanding the gene expression in the control of cell function and cell cycle progression requires a detailed understanding of DNA structure and function in interphase and metaphase chromosomes. Focusing on this need, the 31th NATO ASI Series presents a comprehensive and updated view on the structure of DNA (down to the atomic resolution) and its function (down to gene level). The introductory chapter presents an overview by the editor of this book C. Nicolini on the genome structure - function from nuclei to chromosomes and nucleosomes. The core of the book then focuses on various aspects of DNA structure and function, e.g., DNA loops and domain organization, interrelationships between nuclear structure and transcriptional control of cell cycle, transcriptional regulation in a chromatin environment, nucleosome and chromatin structures and functions, chromatin structure and gene regulation by steroid function, histone acetylation. Special chapters deal with genetics of human astrocytic tumors and tumor progression and metaphases, the future of DNA sequencing after the human genome project and with the large-scale chromatin structure. Readers of *Biologia Plantarum* will certainly be interested in the chapter on plant gene technology, presenting data on the methods for obtaining plants resistant to viruses, herbicides and insects. Written by foremost experts in the field of DNA structure and function, this book will aid experienced researchers who wish not only to extend their knowledge but as a source of ideas for future research.

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Francel, L.J., Neher, D.A.(ed.): **Exercises in Plant Disease Epidemiology.** - APS Press, The American Phytopathological Society, St. Paul 1997. Pp. 233, 4 diskettes. USD 79.00. ISBN 0-89054-224-4.

This laboratory manual is intended for use by students and scientists interested in quantitative methods of botanical epidemiology. The book has been divided into five topic sections: Measuring Disease and Pathogen Populations, Temporal Aspects of Epidemiology, Spatial Aspects of Epidemiology, Host-Parasite Population Dynamics, and Yield Loss and Disease Management in 34 chapters. The sections contain multiple chapters, each addressing an independent topic or a perspective on a major theme in epidemiology. If desired, several exercises can be combined to follow a structured theme. Occasionally, reference to content in another chapter is cited to avoid repetition. Each chapter within the book is organized with a common format for ease of use. The preparation section provides background information necessary to complete the exercise such as procedures and schedule, time needed to complete the exercise, any materials needed, including commercial software and sources for those materials, and names of accompanying files on the enclosed four diskettes. The Introduction section includes background information about the chapter topic, including the objectives of the exercise. The Procedure section contains methodology, expected results, and an interpretative discussion. The user will need to enter specific commands to initiate certain computer software programs. Suggested activities, which often take the form of questions requiring application of principles in the chapter, usually are presented in the Evaluation section, although some authors chose to integrate them into the Procedure. Additional information can be obtained on the chapter topic by consulting references listed in the Further Reading section. Answers to questions posed may be found in the Appendix. Although numerical solutions are provided, detailed steps in calculation sometimes have been omitted. The answers are intended to provide the user feedback on whether their derivations in determining the solution were correct. In cases where there may be multiple correct answers, either a terse or no answer has been provided.

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