
Book reviews

Schulz-Schaeffer, J.: Cytogenetics: Plants, Animals, Humans, 1st edn. Berlin, Heidelberg, New York: Springer 1980. 446 pp., 219 figs., 11 tabs.

This textbook of cytogenetics is intended for undergraduates with a background knowledge of genetics and cytology but it may also be used as a reference work for researchers in the field. It is based on a course in cytogenetics taught by the author at Montana State University and reflects his lecturing experience. The material used comes from data obtained in plant, animal and human cytogenetics and this combination is of a special value for the user of the book. The coverage is wide and the text is subdivided into 9 sections dealing in turn with: History of cytogenetics, Structure of chromosomes, Function of chromosomes, Movement of chromosomes, Variation of chromosome types, Variation in chromosome structure, Variation in chromosome number, Variation in chromosome function and Movement and extrachromosomal inheritance. In 20 chapters the whole field of cytogenetics is adequately covered and the author provides the reader with a detailed insight into the present state and development of cytogenetics. All chapters are up to date, make easy reading and understanding and begin with definitions and brief descriptions which facilitate understanding of the problems being dealt with. The text is illustrated with many good diagrams and the book contains an exceptionally full bibliography. It is a welcome addition to the cytogenetics textbooks available and will find a firm place among them.

R. Rieger, Gatersleben

Vining, Leo C. (ed.): Biochemistry and Genetic Regulation of Commercially Important Antibiotics. London, Amsterdam, Don Mills (Ontario), Sydney, Tokyo: Addison-Wesley 1983. xiv + 370 pp., several tabs.

This book surveys our recent knowledge concerning the biology and biochemistry of antibiotic production by bacteria and fungi. The first three chapters deal with the genetics of the most important producer strains and with the range of metabolic controls that affect biosynthesis of antibiotics. Although, attempts towards more rational screening procedures have become common, the most recent strain improvement programs in industry have been carried out by random testing of survivors of mutagenesis treatment. Undoubtedly the recent development of genetic techniques should facilitate the important tasks of yield improvement and recombinant DNA techniques will be used to great advantage for the elaboration of new production strains. In 11 subsequent contributions several authors have outlined the ways in which the more important antibiotics, such as the β -lactams, peptides, macrolides, polyenes, rifamycins, tetracyclines and others, can be synthesized. In general, it seems that much remains to be done before the genetic control of antibiotic production is well understood. Despite this fact, the book should be of particular value to those seeking to apply the new techniques of genetic engineering in this field.

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