

tionary relationships between parasitic helminths and their hosts, 9. Parasite-host coevolution, 10. Evolutionary interactions among herbivorous insects and plants, 11. Dispersal of seeds by vertebrate guts, 12. Coevolution and mimicry, 13. Coevolution and pollination, 14. Intimate association and coevolution in the sea, 15. Coevolution and the fossil record, 16. The deer flees, the wolf pursues: incongruencies in predator-prey coevolution, 17. Coevolution between competitors, 18. Size of coexisting species, 19. Convergent evolution at the community level. At the end of the volume a brief overview of many of the ideas of the different authors is given by D.J. Futuyma and M. Slatkin.

R. Piechocki, Halle/Saale

Swan, A.; MacGregor, H.; Ransom, R. (eds.): **Programmes for Development. Genes, Chromosomes and Computer Models in Developmental Biology. Journal of Embryology and Experimental Morphology, Vol. 83.** Cambridge: The Company of Biologists Limited 1984. 369 pp., several figs. and tabs.

"Programmes for Development" is a compilation of papers presented at a symposium that deals with research programmes based on a wide range of developmental phenomena. This provides a book in which the reader can learn about systems that stretch from microbes to man. At the same time it emphasizes the generality of most developmental phenomena and the important differences between plant and animals and between simple and complex systems. The symposium focussed on genes and chromosomes and the papers can be divided into three categories. First: the influence of repressor and activator molecules. Proteins that specifically block or facilitate the synthesis of messenger RNAs by binding at or near the transcription sites. The second category is one in which the expression of a gene is altered by changing the DNA sequences in its neighbourhood. The cellular oncogenes are the best known examples of this kind of phenomena. Thirdly those kinds of developmental processes that deal with the influence of the shape of the cell in determining the

pattern in which its genes are expressed. For example, a cell on a certain substrate will adopt a certain shape and express a special group of genes. In this context special attention was focused on the role of the plant cell form and the programming of the expression of its genes and vice versa.

The exact titles of the presented papers are as follows:

1. An introduction to Programmes for Development; 2. Chromosomal changes associated with changes in development; 3. DNA methylation versus gene expression; 4. Chromosomes and sex differentiation in eutherians; 5. Chromosome order – possible implications for development; 6. A programme for the construction of a lambda phage; 7. Subroutines in the programme of *Chlamydomonas* gene expression induced by flagellar regeneration; 8. Switch genes and sex determination in the nematode *C. elegans*; 9. Giberellins and gene control in cereal aleurone cells; 10. Analysis of transcriptional regulation of the *s38* chorion gene of *Drosophila* by P element-mediated transformation; 11. Heat shock – a comparison of *Drosophila* and yeast; 12. Photoregulation of the biosynthesis of ribulose biphosphate carboxylase; 13. Polarity, calcium and abscission: molecular bases for developmental plasticity in plants; 14. Programmed development in the mouse embryo; 15. Computer modelling of cell division during development using a topological approach; 16. A mathematically modelled cytochrome cortex exhibits periodic  $Ca^{++}$ -modulated contraction cycles seen in *Physarum* shuttle streaming; 17. Models for positional signalling, the threefold subdivision of segments and the pigmentation pattern of molluscs; 18. Cell behaviour in a polygonal cell sheet on the crawling of cells.

A reader who makes the effort to examine several contributions and evaluate them individually will experience that this book is more than just a collection of papers: he will understand more about the fundamental principles that govern growth and form in living organisms. The clear and concise manner in which most of the articles are written is also an attractive feature of the book.

J. A. M. Schrauwen, Nijmegen

## Announcement

### Genetic Congress

The 16th International Congress of Genetics will take place in Toronto, Ontario (Canada) from 20 to 27 August 1986

**Information:** Mr. L. Forget (Congress Manager), National Research Council of Canada, Ottawa, Ontario K1A 0R6, Canada

### Human Genetics Congress

The 7th International Congress of Human Genetics will be organized at Berlin (West) in the period between September 22 and 26, 1986