

DEVELOPMENT The Molecular Genetic Approach

Questions about life continually arise and never cease to fascinate the scientist, such as the fundamental question, "How can a single cell develop into an entire organism?"

This book presents the current state of research involved in answering this question. Described here are the molecular events which are responsible for specific processes in the major model systems, including viruses, bacteria, plants, animals, and human cell lines, which currently play key roles in research in developmental biology. The control of fundamental processes such as the cell cycle, the determination of cell type and the programming of pattern are discussed. Common themes, including the regulation of genes in time and space, the role of homeobox genes and of oncogenes in cellular signalling pathways, are emphasised. Several chapters are devoted to the potential practical benefits of developmental biology.

Written by outstanding scientists, each a specialist in a particular field and chosen by an international editorial board, this textbook provides the reader with a timely insight, of exceptional quality, into molecular developmental biology.