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Developmental Genetics

Gurbachan S. Miglani, I. K. International Publishing House Pvt. Ltd., New Delhi, First Reprint, 2006, pp 792; Rs. 475/-; ISBN 81-88237-59-0

The present 775 plus page paper back book "Developmental Genetics" costing only Rs. 475/- under review is the first reprint of the book by Gurbachan S. Miglani, formerly Professor, Department of Plant Breeding, Genetics and Biotechnology, Punjab Agricultural University, Ludhiana, Punjab. An experienced writer of books on genetics, Prof. Miglani has attempted to provide up-to-date, readily comprehendible and quality study material on Developmental Genetics to students of the subject at graduate and post-graduate levels in this edition in a simple and easily understandable narrative language. The treatment of the subject in the book retains the basic approach of a text book and attempts to explain the various concepts and phenomenon, hypotheses, principles and theories in a simple, clear and easy to-follow discussion with suitable illustrated examples

The book has a total of 20 chapters on the topics: 1. Introduction, 2. Inheritance of Developmental Differences, 3. Genome Constancy in Development, 4. Nucleus and Nucleo-Cytoplasmic Interactions, 5.Gene-Protein-Phenotypic Relationship, 6. Gene Regulation and Differentiation, 7. Cells in Development, 8. Cell-Specific Gene Activation and Tissue Differentiation, 9. Plant Embryology, 10. Gamete Formation, Fertilization and Cleavage in Animals, 11. Animal Development, 12. Doses Compensation and Sex Determination, 13.Ageing Apoptosis, 14. Patern Formation and Epigenetics, 15. Morphogenesis, 16. Homeosis, 17. Stem Cells, 18. Signal Transduction, 19. Recent Progress in Developmental Genetics, 20. Synthesis.

The treatment of subject matter in each chapter is really exhaustive and the text in the chapters is supported by a large number of figures, illustrations, formulae and tables, wherever necessary. Keeping in view the benefits of the target audience of this text book, primarily graduate and post graduate students, all the chapters also have questions at the end. The book under review adequately covers all the major topics of importance in the fast progressing areas of developmental genetics currently undergoing a major change in terms of advancement of scientific knowledge, opportunities and practices and presents in its 20 chapters almost everything that a student at graduate or post-graduate level or even a beginner of developmental genetics discipline needs to know. Chapter 17 on stem cells provides latest information on this hotly discussed current topic. Chapter 19 in particular is devoted to recent developments in the subject and the last chapter presents a synthesis of development, genetics and evolution into a broad perspective of this important subject.

The chapters are followed by an extensive Glossary running into 100 pages covering a wealth of additional and exhaustive information on various topics related with the field of developmental genetics. It has very useful and in-depth details of various terms in this field for students and beginners of developmental genetics on several major topics covered in the chapters of the book.

The book also includes important references in the comprehensive bibliography running in to 46 pages. An A to Z Author Index (25 pages) as well as a comprehensive Subject Index (30 pages) add on to the standard and utility of this textbook. Except a few typographical mistakes here and there, the book written in a simple language, is a complete reference on developmental genetics and makes an interesting reading.

The book is well prepared with a paperback jacket binding to keep the cost most affordable, particularly to students. The author and the publisher deserve all appreciation for bringing out this excellent up-to-date book at such a modest and affordable price. Research workers, teachers as well as students of genetics, biotechnology, evolution and plant breeding at graduate and post graduate level will find the book very useful. In view of its excellent quality and quantity of scientific contents, the book richly deserves a valuable addition in all agricultural colleges, universities and research institute libraries and of course a special place in the personal collection of every student preparing for competitive examinations in life sciences and looking forward to make their contribution in the field of developmental genetics.

M.C. KHARKWAL
Secretary & Editor