Plant Development: Role of Gene Regulatory Networks

About the Book

Gene regulatory networks are composed of molecular regulators such as transcription factors which bind short, non-coding DNA sequences. These sequences are also called cis-regulatory elements and are located in the promoter region of a gene. Transcription regulators form an interconnected regulatory network which integrates endogenous and environmental signals into changes in gene expression. Gene regulatory networks provide an insight about organization of plant cells and their functions. They consist of thousands of connections between the target genes and transcription factors. Together, they regulate many cellular functions. They also help in understanding the regulation of genes under various conditions. The book studies, analyses and upholds the pillars of gene regulatory networks and its utmost significance in modern times. From theories to research to practical applications, case studies related to all contemporary topics of relevance to this field have been included herein. As this field is emerging at a rapid pace, the contents of this book will help the readers understand the modern concepts and applications of the subject.

About the Editor

Isabel Nelson pursued her MSc in Plant Science and Biotechnology from the University of Leeds, United Kingdom. Her academic interests lie in embryogenesis, organogenesis, marker assisted selection, reverse breeding and double haploids. Nelson's research papers have been helpful to many fellow researchers in their respective fields. She is an active member of several scientific and technical societies, where she continues to share her expertise and knowledge in these fields.

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