

PLANT EPIGENETICS

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EDITED BY

Peter Meyer

With the discovery of RNAi pathways and the histone code, epigenetics has become a popular and fast evolving research topic. Plant science has made a number of elementary contributions to this field, and the common elements of epigenetic systems have linked research groups interested in plant, fungal and animal systems.

This volume provides a comprehensive overview of epigenetic mechanisms and biological processes in plants, illustrating the wider relevance of this research to work in other plant science areas and on non-plant systems. It discusses recent advances in our knowledge of basic mechanisms and molecular components that control transcriptional and post-transcriptional silencing, an understanding of which is essential for plant researchers who use transgenic lines for stable expression of a recombinant construct or for targeted inactivation of an endogenous gene. These aspects should be of special interest to the agricultural industry.

The volume illustrates the relevance of epigenetic control systems to gene regulation and plant development, examining paramutation, genomic imprinting and microRNA-based gene regulation mechanisms. Finally, it demonstrates the significance of epigenetic systems to viral defence and genome organisation.

The volume is directed at researchers and professionals in plant molecular genetics, plant biochemistry and plant developmental biology.

The Editor

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