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Molecular analysis of transcriptional gene silencing in Arabidopsis

By MUHAMMAD TARIQ

VDM Verlag Mai 2010, 2010. Taschenbuch. Book Condition: Neu. 220x150x7 mm. This item is printed on demand - Print on Demand Neuware - Transcriptional gene silencing enables multi-cellular eukaryotes to achieve differential gene expression during differentiation. In plants and mammals, silent chromatin is associated with hypermethylation of DNA at CpG sites and methylation of histone H3 at lysine 9 (H3K9-met). These covalent modifications attract specific chromatin binding factors and ensure faithful inheritance of gene expression patterns during DNA replication and mitosis, referred as epigenetic inheritance. Importantly, chromatin factors which act independent of DNA methylation in maintenance of heritable gene silencing are also known in Arabidopsis. The intricate relationship between DNA methylation, H3K9-met and chromatin binding factors is under intense scrutiny to understand epigenetic inheritance. This book reveals a complex inter-play between DNA and H3K9 methylation deciphered in Arabidopsis. In addition it also reveals how epigenetic silencing can be reversed without passage through S phase of cell cycle. This concludes that epigenetic plasticity enables cells to survive constantly changing environment during differentiation when chromatin is subject to dynamic regulation. 116 pp. Englisch.



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Reviews

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-- Dana Hintz

Good electronic book and valuable one. It really is basic but unexpected situations in the 50 percent in the pdf. You wont really feel monotony at at any moment of your time (that's what catalogues are for concerning when you ask me).

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