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生物技术 生命科学

microRNA与植物花发育调控的研究进展

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摘要:

microRNAs(miRNAs)是约21nt的非编码RNA,主要在转录后水平调节基因的活性。miRNAs通过与靶基因的互补位点结合从而降解靶基因mRNA或抑制其翻译。miRNAs 参与调控植物生长发育的多个方面,包括生长、开花、代谢、激素应答、生物与非生物胁迫。综述了miRNAs在植物花发育中的研究进展,以期为更好地了解miRNA在此过程中的作用机制,并应用于改良植物的农艺性状及培育优良品种奠定基础。

关键词: miRNA;植物;调控;发育;花器官发育

Research Progress on microRNAs Role in Controlling Flower Development

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Abstract:

MicroRNAs (miRNAs) are non-coden RNAs with ~21 nucleotides, and have post-transcriptional regulation activities. MiRNAs can degrade and/or repress the translation of target genes by binding to the complementary sites of target genes. MiRNAs participated in many aspects of plant growth and development including growth, flowering, metabolism, hormone response, biotic and abiotic stress, etc. This paper mainly summarized the role of miRNAs in flower development, which is to better understand the mechanism of miRNAs in this process and provides basis for their application in improving plant agronomic traits and breeding excellent varieties.

Keywords: miRNA plant control development flower organ development

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