

## MicroRNAs in plant development and stress responses

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### Abstrak

Precise regulation of gene expression in both time and space is vital to plant growth, development and adaptation to biotic and abiotic stress conditions. This is achieved by multiple mechanisms, with perhaps the most important control being exerted at the level of transcription. However, with the recent discovery of microRNAs another ubiquitous mode of gene regulation that occurs at the post-transcriptional level has been identified. MicroRNAs can silence gene expression by targeting complementary or partially complementary mRNAs for degradation or translational inhibition. Recent studies have revealed that microRNAs play fundamental roles in plant growth and development, as well as in adaptation to biotic and abiotic stresses. This book highlights the roles of individual miRNAs that control and regulate diverse aspects of plant processes.