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Effects of RNAi on SAUR gene expression

Auxin is a plant hormone that controls many aspects of growth and development. At the molecular level, auxin has been shown to rapidly induce the transcription of specific genes. A family of auxin responsive genes, called the SAUR (Small Auxin Up RNAs) gene family, contains at least 70 genes in Arabidopsis. Based on sequence homology, these genes can be grouped into several sub-families. The function of these genes is currently unknown. To investigate SAUR gene function, we are taking an RNAi approach to study the effects of silencing gene expression of several SAUR sub-families. We have constructed SAUR RNAi plasmids and introduced them into Arabidopsis plants by vacuum infiltration. Seed from these plants have been plated on selection medium, and we currently have numerous plants that have survived the selection. These putative transformants will be transferred to soil, and monitored for any growth phenotypes that differ from wild type plants. Candidate plants will be analyzed to confirm silencing of SAUR gene expression.