Elongator and SPT4/SPT5 complexes as proxy to study RNA polymerase II transcript elongation control of plant development

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The elongation phase of the RNA polymerase II (RNAPII) transcription process is dynamic and regulated. Elongator and SUPPRESSOR OF Ty4 (SPT4)/SPT5 are transcript elongation factors that contribute to the regulation of mRNA synthesis by RNA polymerase II in the chromatin context. Recently, the Elongator complex consisting of six subunits and the SPT4/SPT5 heterodimer were isolated from Arabidopsis. Mutant plants affected in the expression of Elongator or SPT4/SPT5 share various auxin-signaling phenotypes. In line with that observation, auxin-related genes are prominent among the genes differentially expressed in these mutants. Exemplified by Elongator and SPT4/SPT5, we discuss here the role that transcript elongation factors may play in the control of plant growth and development.

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