

THE *ERF-AP2* GENE IN POPLAR STRESS PATHWAY

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Trees regulate vegetative growth in response to internal and environmental factors. While favorable conditions promote vegetative growth, stress induces growth cessation. Our research shows that the *FLOWERING LOCUS T2* (*FT2*) gene is involved in controlling vegetative growth during the growing season in poplar trees (*Populus* spp.). To understand the mechanism of how *FT2* controls vegetative growth under stress, we conducted microarray studies and identified the *Ethylene-Responsive Factor APETALA2* (*ERF-AP2*) gene, downstream of *FT2*. *ERF-AP2* belongs to a family of transcription factors that may have a number of functions in growth and development. We conducted physiological studies to understand the relationship between *FT2* and *ERF-AP2* in relation with tree growth and development. We will discuss our findings in this presentation.