



Characterization of a poplar GM tree with strong alterations in growth and wood anatomy: transgene expression level vs insertion site effects?

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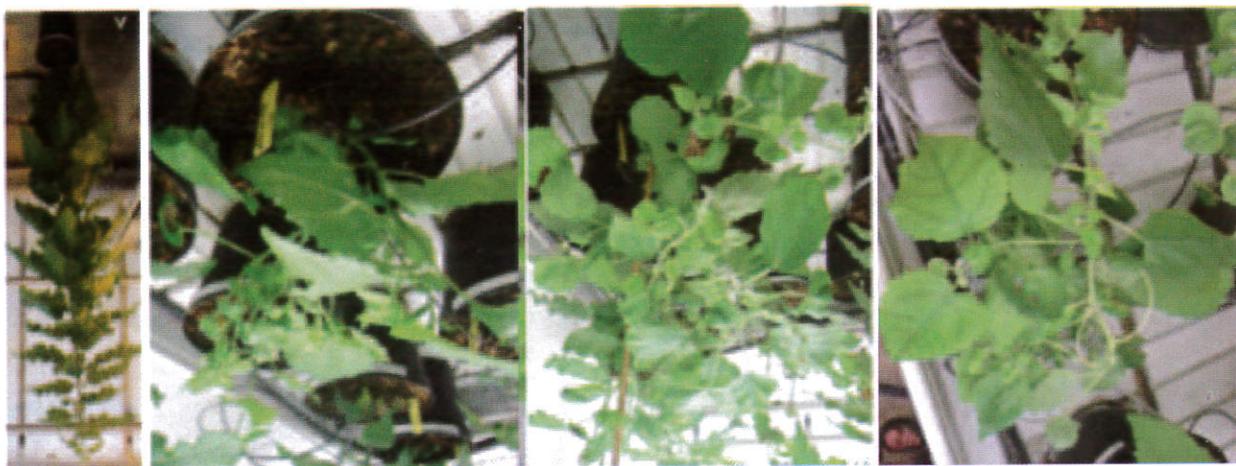


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been partly funded by the "Stress in Trees" project (ANR-12-BS09-0004).
phenotype probably results from an important part from an alteration of theABA signalling pathway. This work has explained a loss of ABA response as supported by the analysis of co-expression networks. Thus, the strong Miyuki profile between Miyuki and WT plants: ABR1 was over-expressed in the Miyuki compared to WT, which may explain ABA signalling pathway involved in responses to stress conditions. Further, we compared gene expression of the ABA homologues in Miyuki, located in the vicinity of an ABR1 homologue, a negative regulator of T-DNA insertion was detected in Miyuki, located in the vicinity of an ABR1 homologue, a negative regulator

Strong phenotype of Miyuki plants. On the right, a WT plant (scale is different)



an early G-fibre maturation in Miyuki compared to WT poplars.
important alterations in wood anatomy. Modifications in the distribution of polysaccharides in fiber cell walls suggested dominance, twining stems, reduced growth and increased pathogen sensitivity. The genetic modification also led to AGP. One and only one of these GM lines (named Miyuki) exhibited a very strong phenotype with a loss of apical wall formation, we produced and analyzed a number of GM poplar lines modified for the expression of a fasciclin-like up-regulated during tension wood in poplar. In order to unravel the function of this class of proteins in cell a supple-memtal cell wall layer named G-layer. A number of arabinogalactan proteins (AGP) have been shown to be wood (TW), a peculiar wood with striking mechanical properties. In many species including poplar, TW fibers harbor Hardwood trees are able to reorient their axes in response to environmental cues, thanks to the formation of tension

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WOOD ANATOMY: TRANSGENE EXPRESSION LEVEL VS INSERTION SITE EFFECTS?

CHARACTERIZATION OF A POLAR GM TREE WITH STRONG ALTERATIONS IN GROWTH AND