



## ***ABSTRACT***

*“Adventitious rooting: an adaptive response at the crosstalk of auxin and jasmonate”*

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Adventitious rooting (AR), a limiting step for vegetative propagation of plants, is a quantitative genetic trait with a high phenotypic plasticity due to multiple endogenous and environmental regulatory factors. This highly plastic trait is controlled in *Arabidopsis* by a subtle balance between positive and negative transcriptional regulators (*ARF6*, *ARF8* and *ARF17*), themselves regulated by microRNAs (*MIR160* and *MIR167*) and repressors from the *Aux/IAA* gene family. The three *ARF* genes control AR by modulating jasmonic acid levels. Thus, AR is an adaptive response at the crosstalk of auxin and jasmonate signaling pathways.