

New Phytologist Supporting Information

Article title: Vegetative phase change in *Populus tremula x alba*

Authors: EH Lawrence, AR Leichty, EE Doody, C Ma, SH Strauss, and RS Poethig

Article Acceptance Date: 17 February, 2021

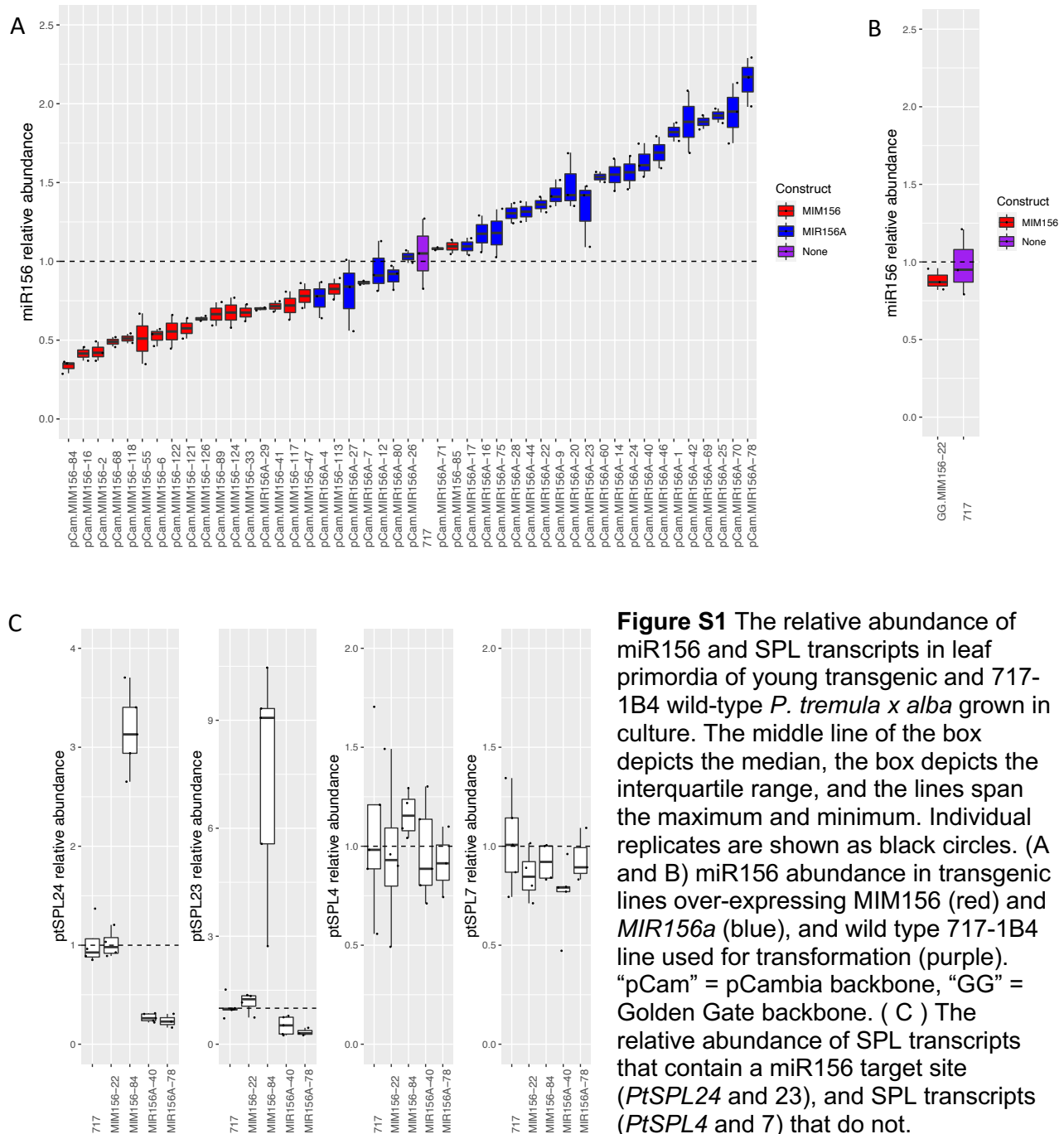


Figure S1 The relative abundance of miR156 and SPL transcripts in leaf primordia of young transgenic and 717-1B4 wild-type *P. tremula x alba* grown in culture. The middle line of the box depicts the median, the box depicts the interquartile range, and the lines span the maximum and minimum. Individual replicates are shown as black circles. (A and B) miR156 abundance in transgenic lines over-expressing MIM156 (red) and *MIR156a* (blue), and wild type 717-1B4 line used for transformation (purple). “pCam” = pCambia backbone, “GG” = Golden Gate backbone. (C) The relative abundance of SPL transcripts that contain a miR156 target site (*PtSPL24* and 23), and SPL transcripts (*PtSPL4* and 7) that do not.

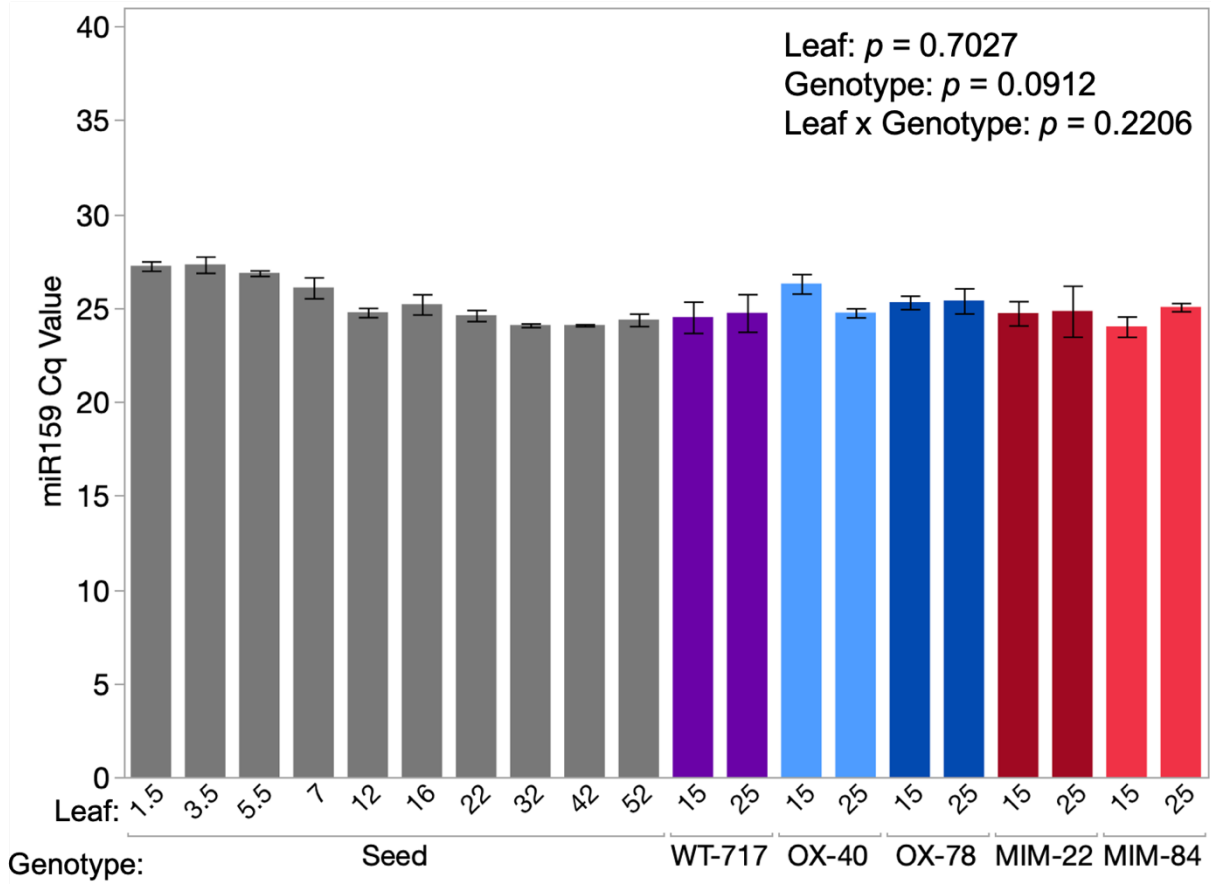


Figure S2. Cq values from qPCR of miR159 at different leaf positions in the genotypes of *P. tremula x alba* used in this study. These values were used to normalize miR156/7 abundance in these samples. ANCOVA results with leaf position and genotype as effects reported in the upper right corner of the graph show no significant differences. Error bars represent \pm standard error.



Figure S3. Representative plants from the wild-type 717-1B4, miR156a overexpressor line 40 and MIM156 line 84 three months following transplant from tissue culture. White asterisk marking leaves at node 25.

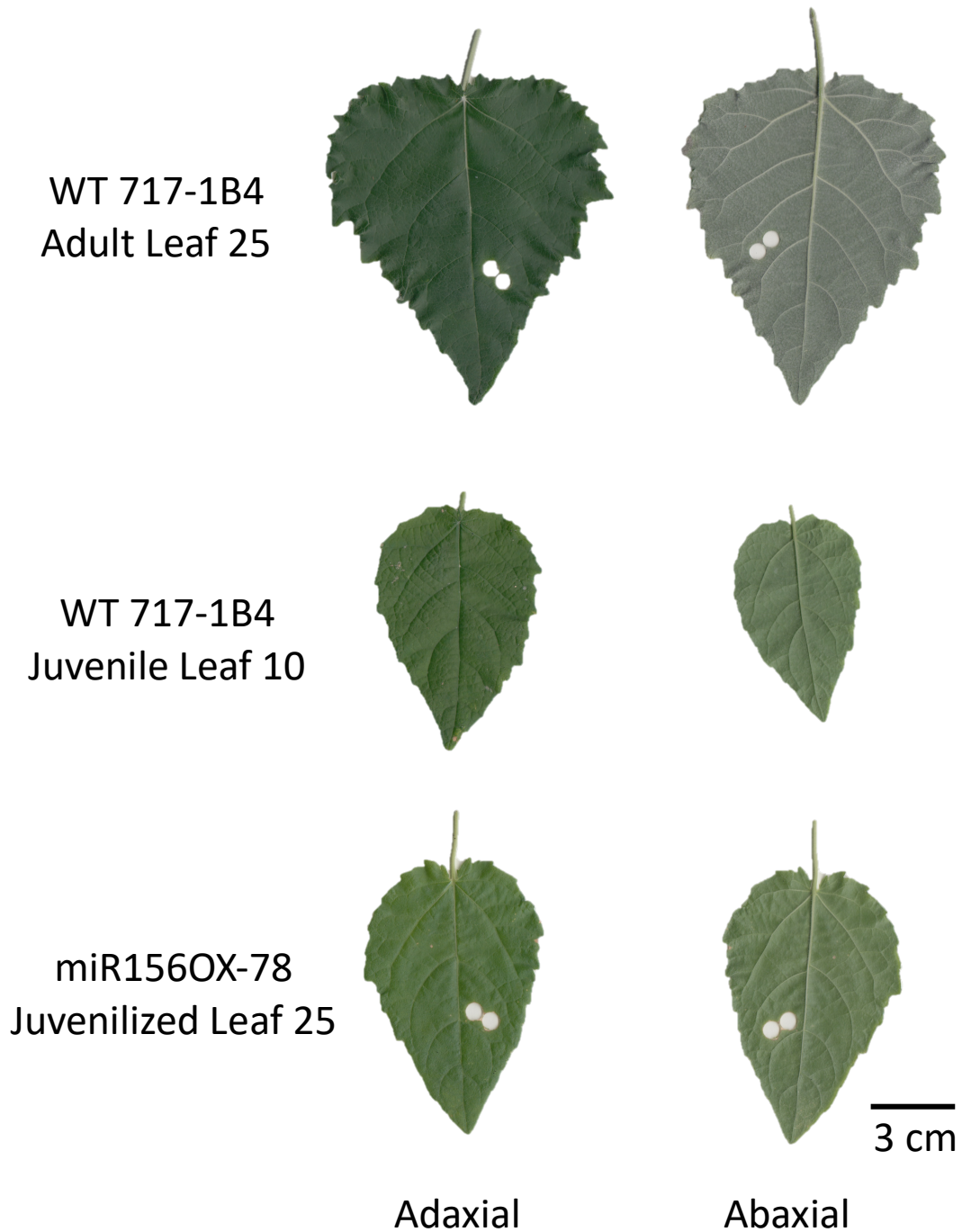


Figure S4. Leaf scans showing the adaxial (left) and abaxial (right) sides of adult, juvenile and juvenilized leaves of *P. tremula x alba*. Note the white appearance of the abaxial side of the adult leaf is due to a dense layer of trichomes that is not present on juvenile and juvenilized leaves. The white circles are the positions from which samples of the lamina were taken.

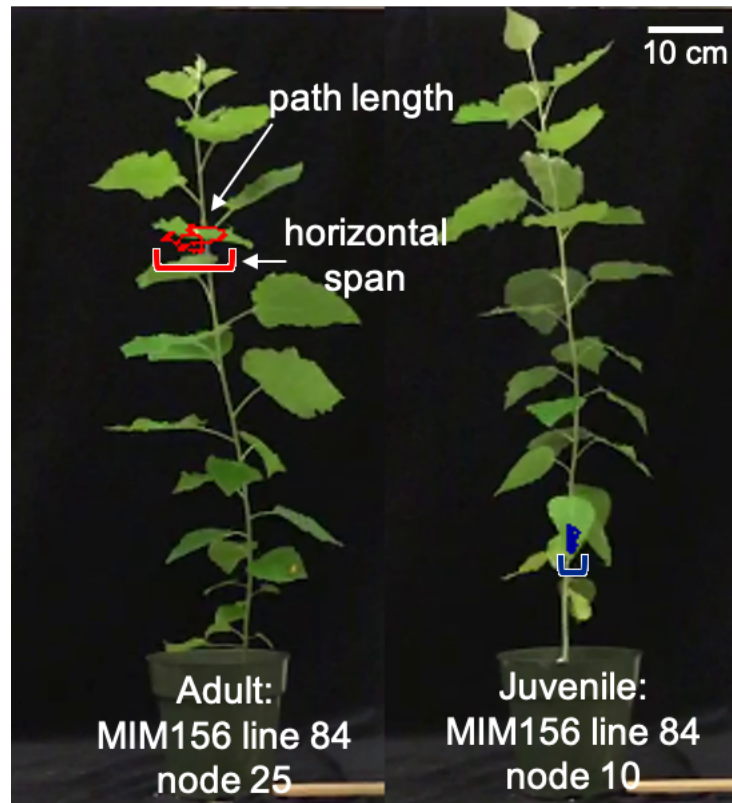


Figure S5. Diagram showing representative fluttering paths for adult (node 25) and juvenile (node 10) leaves of MIM156 line 84.

Video S1 Representative samples of leaf fluttering in a miR156 overexpressor (left) and 717-1B4 wild-type line (right) of *P. tremula x abla*. Leaf at node 25 marked with yellow tape on the adaxial surface. Video starts in slow motion and switches to full speed at 00:22.