

On the Cover: The image shows the stem cross section of the transgenic *Populus trichocarpa* plant overexpressing (OE) a MYB transcription factor 161 (PtrMYB161). Overexpression of *PtrMYB161* disrupted the normal stem vascular meristematic activities (wood differentiation), leading to a reduced secondary xylem (wood) area. The secondary cell-wall formation was severely suppressed in the xylem fibers of OE-PtrMYB161 transgenics, but the effect was not obvious for vessel cells. The number of fiber cells differentiated per unit area was reduced, and the number of vessel elements was increased compared to wildtype. These transgenic vessels were significantly smaller in diameter, as revealed by their lumen areas. PtrMYB161 functions as an activator as well as a repressor in a transcriptional regulatory network for wood formation in *P. trichocarpa*. Image credit: Zhifeng Wang.

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