



**Figure S2.** Regeneration and transformation of *Gisela* 6 explants.

Indirect regeneration from leaf (A-C) and petiole (D-F) explants. Calluses formed at the wound sites of explants (A, D) and single (B, D) and multiple (C, E) shoots developed. Petiole were not used in transformation experiments due to a lower number of shoots *per* explant.

*GFP* transfer process (G-K). The *pCAMBIA1302* vector (G) conferring resistance to HYG and synthesizing the *GFP* was used. Restriction sites used to excise the *HPTII* probe for Southern blot analysis are in red. Example of shoot regenerated from HYG resistant callus (H) and (I) 2<sup>nd</sup> round of selection. A putative resistant clone is circled. J) Putative *GFP*-transformed clone upon selective media. K) *GFP*-transformed rooted clones. Left, HYG sensitive; right, putative transformed HYG<sup>+</sup> clone.

*KNOPE1* transfer process (L-P). *KNOPE1* was cloned (restriction enzymes in blue) into the *pBA002* vector (L) conferring resistance to PPT. Restriction sites used to excise the *BAR* probe for Southern blot analysis are in red. M) Example of indirect organogenesis from PPT resistant callus and 2<sup>nd</sup> round of selection. A putative resistant clone is circled. O) *KNOPE1*-transformed clone showing altered leaf margins and stunt phenotype. P) *KNOPE1* clone adapted on soil.