



**Supplementary Figure 1.** Explant sources and types for shoot regeneration of field-grown white poplar (*P. alba* L.). A) A young branch about one-year-old (45-50 cm in length and 0.2-0.5 cm in diameter) from a field-grown white poplar (the nodes were numbered); B) The pulvini at the basis of leaf petiole (1 cm long) (surrounded by black rectangular) close to the stem and leaf intersection of 1th-7th nodes. The pulvini tissue was divided into five regions of A-E with equal size of ~2mm in length each; C) The adjacent tissues from internodal stem segments close to the axillary buds (1 cm in length), surrounded by a black rectangle; D) Longitudinal thin cell layer explants 10 mm long and 2-5 mm diameter at day 1; E) Transverse thin cell layer explants with 0.5-1.0 mm thickness at day 1; Bars indicate 1 cm.