



Supplementary Figure S1. Morphological and histological characterization of isogenic embryonal mass (EM) and non-embryogenic callus (NEC) of Douglas-fir.

(A) Morphology of SD4-8 EM, (B) Small somatic embryos of SD4-8 EM; paraffin section stained with Nuclear Fast Red/Alcian Blue; (C) Morphology of SD4-8 NEC; (D) Histology of SD4-8 NEC; note the cells accumulating phenolic compounds (in grey-blue, brownish or amber colour); (E) morphology of TD17-1 EM; (F) Polyembryogenic centres of TD17-1 EM; (G) morphology of TD17-1 NEC, (H) Histology of TD15-1 NEC. Scale bars represent: 2 mm (A, E); 500 μm (C, H); 200 μm (B, D, F).