



Figure 6. Genes involved in the biosynthesis of salicylic acid (SA) are transiently upregulated in Norway spruce bark in response to methyl jasmonate (MeJA) treatment.

Expression profiles of genes displaying a significantly (adjusted p-value < 0.001) altered expression pattern across time as a result of MeJA treatment and which were annotated as encoding for enzymes and transporters involved in the biosynthesis of SA (yellow boxes). In the plots, faint lines indicate the mean expression profiles, with 95% confidence intervals, of individual transcripts and the thicker lines depict the mean per protein category profile, for water (blue) and MeJA (red) treatments. Read counts were normalised using the variance stabilizing transformation (vst) in DEseq2. The pathway is based on what is known about the biosynthesis of SA in angiosperms. Enzymes in grey are involved in the biosynthesis pathway but no differentially expressed genes were annotated to encode for them. Due to space limitations not all enzymes have associated expression profiles, see Supplemental Data Set 5 for the full list of differentially expressed biosynthesis genes. Compound abbreviations: DQ, 3-dehydroquinate; DHS, 3-dehydroshikimate; Shikimate-3-P, shikimate 3-phosphate; EPSP, 5-enolpyruvoyl-shikimate 3-phosphate; *t*-CA, *trans*-cinnamic acid. Enzyme/transporter abbreviations: DHQ-SDH, dehydroquinate-shikimate dehydrogenase; SK, shikimate kinase; EPSPS, 5-enolpyruvylshikimate-3-phosphate synthase; CS, chorismate synthase; CM1, chorismate mutase 1; PPA, prephenate aminotransferase; ADT/PDT, arogenate dehydratase/prephenate dehydratase (annotated as being encoded for by the same genes); CM2, chorismate mutase 2; PPY, phenylpyruvate aminotransferase; TAT, tyrosine aminotransferase; pCAT, plastidial cationic amino-acid transporter; PAL, phenylalanine ammonia-lyase; AO, aldehyde oxidase; BA2H, benzoic acid 2-hydroxylase; ICS, isochorismate synthase; IGS, isochorismoyl-glutamate synthase; IPGL, IC-9-Glu pyruvoyl-glutamate lyase; EDS5, ENHANCED DISEASE SUSCEPTIBILITY 5.