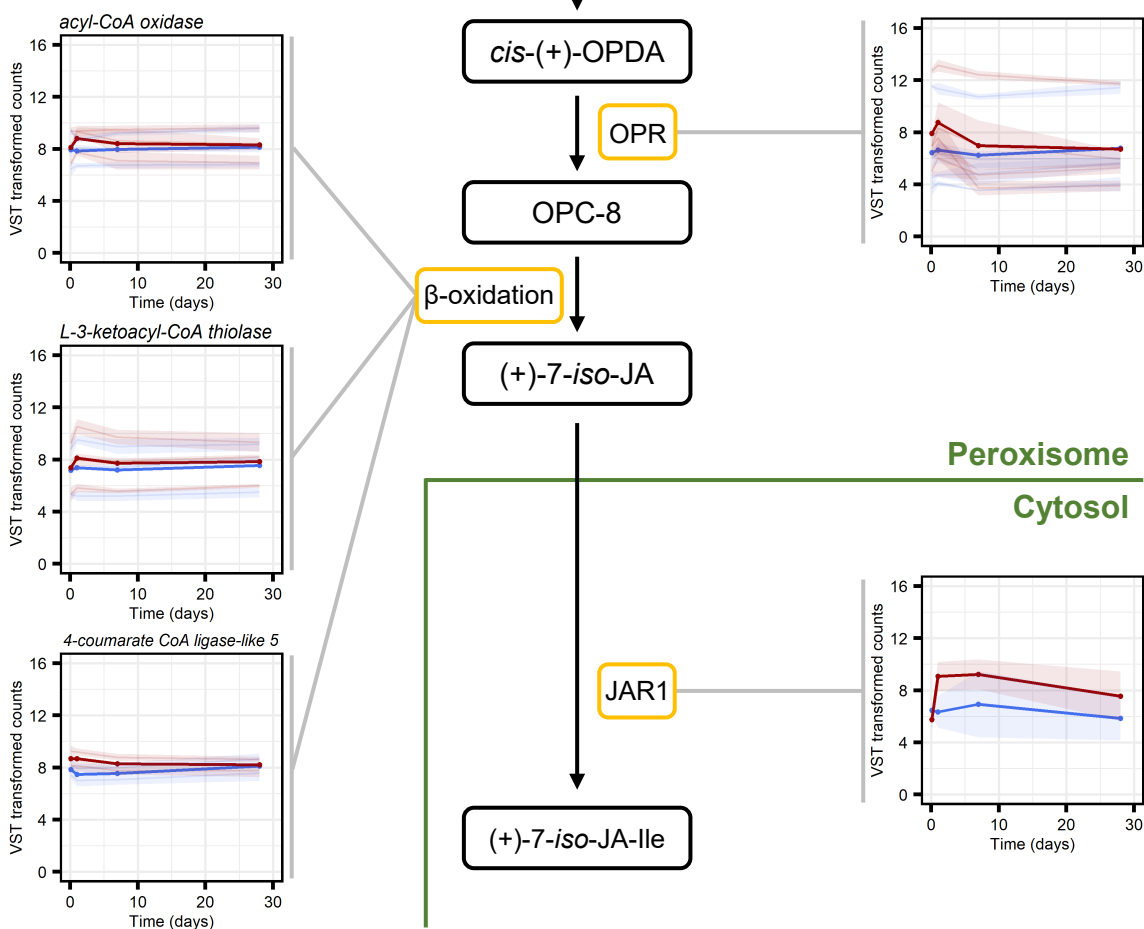


Plastid

Peroxisome



Peroxisome

Cytosol

Figure 5. Jasmonic acid (JA) biosynthesis genes are upregulated, either transiently or for at least four weeks, 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 (yellow boxes) involved in the (+)-7-iso-JA-Ile biosynthesis pathway. 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 enzyme category profile, for water controls (blue) and MeJA treatments (red). Read counts were normalised using the variance stabilizing transformation (vst) in DEseq2. The JA biosynthesis pathway is based on knowledge from angiosperms such as *Arabidopsis thaliana* and *Solanum lycopersicum* and was adapted from Wasternack and Hause (2013) and Wasternack and Song (2017). Compound abbreviations: α -LeA, α -linolenic acid; 13-HPOT, (13S)-hydroperoxyoctadecatrienoic acid; *cis*-(+)-OPDA, *cis*-(+)-12-oxophytodienoic acid; OPC-8, 3-oxo-2-(2-pentenyl)-cyclopentane-1-octanoic acid; (+)-7-iso-JA, (+)-7-iso-jasmonic acid; (+)-7-iso-JA-Ile, (+)-7-iso-jasmonoyl-L-isoleucine. Enzyme abbreviations: PLA₁, phospholipase A1; 13S-LOX, 13S-lipoxygenase; AOS, allene oxide synthase; AOC, allene oxide cyclase; OPR, OPDA reductase; JAR1, JA-amino acid synthetase.