Supplementary Information

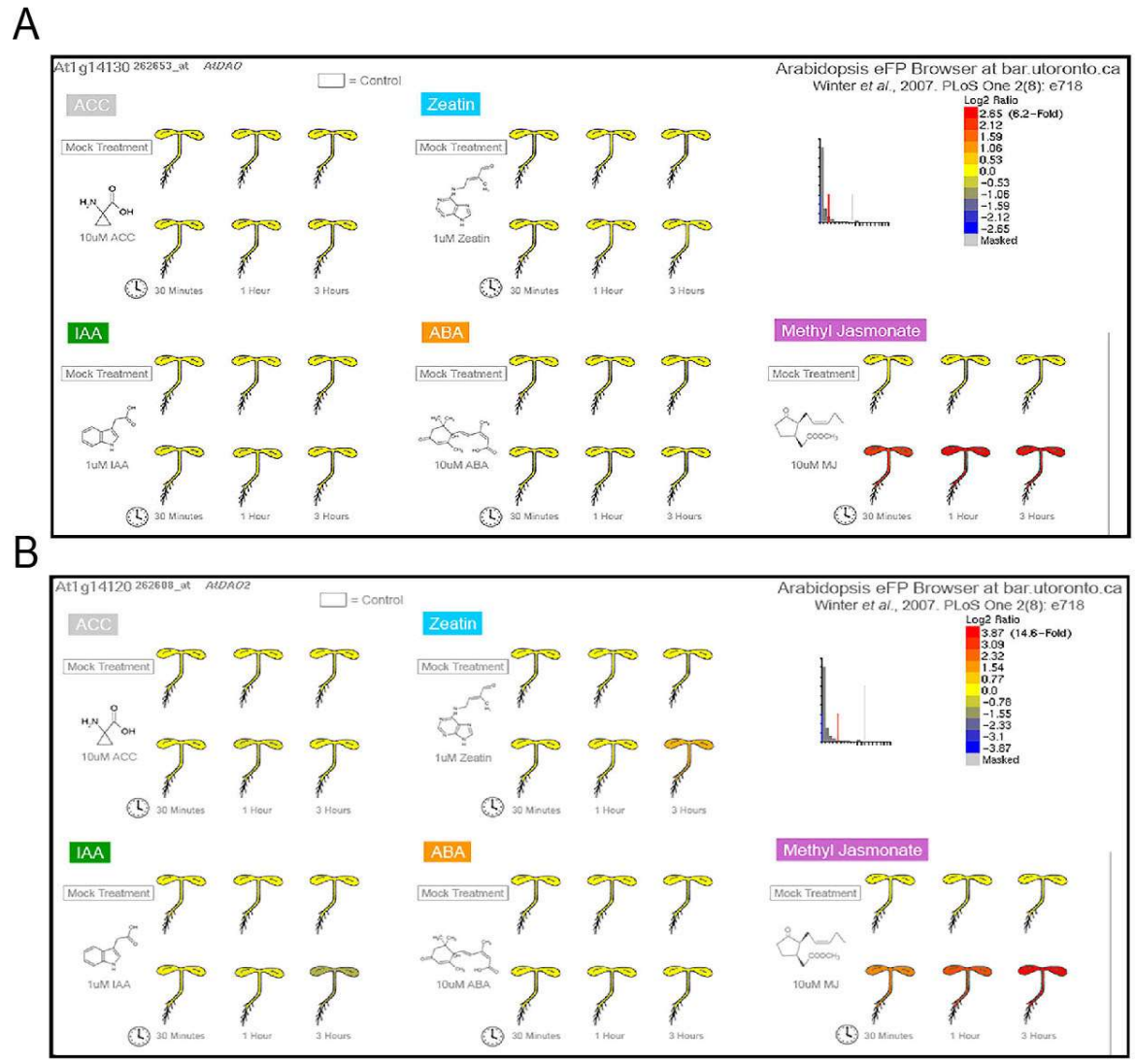

Figure 1. Relative expression data showing that MeJA specifically induces the expression of (A) ***DAO1*** and **(B)** ***DAO2*****.** Data retrieved from the publicly-available dataset at Arabidopsis eFP browser (http://bar.utoronto.ca).

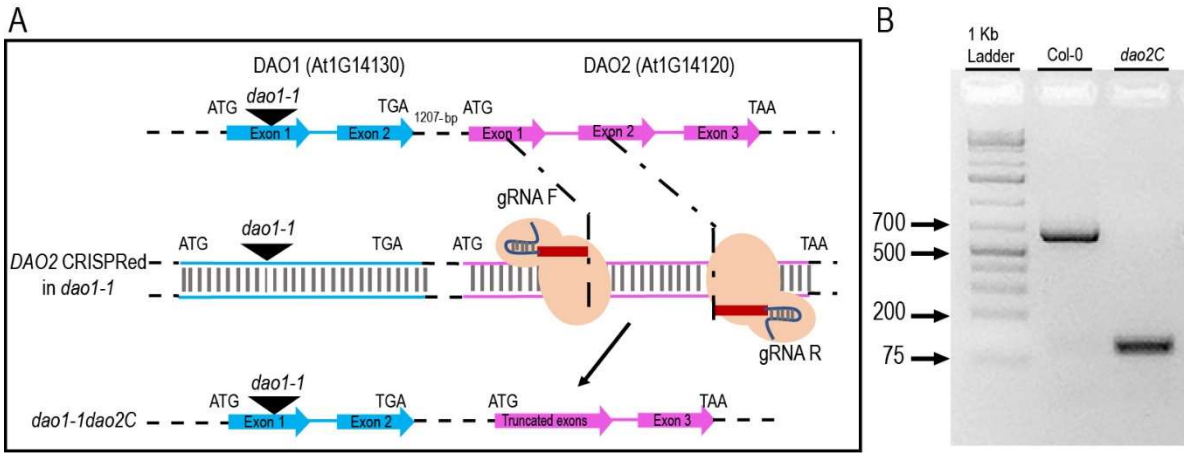

Figure 2. Illustration showing the CRISPR-Cas9 strategy adopted. (A) Two guide RNAs were designed to target a relatively large DNA fragment from the *DAO2* gene in **a** *dao1-1* loss of function mutant background**. (B)** Agarose gel showing 647 bp fragment in the *DAO2* wild type and homozygote deletion of ≈500 bp resulting in ≈100 bp fragment in the *dao2C* allele.

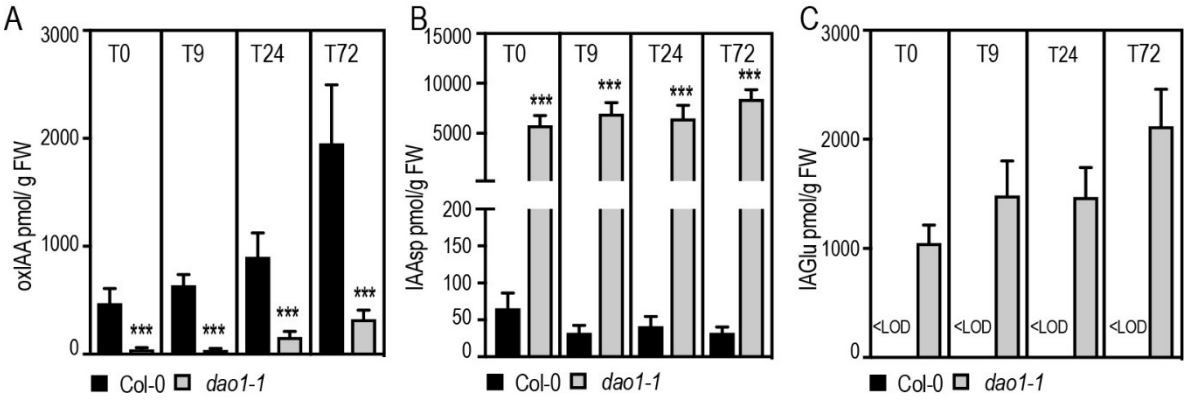

Figure 3. The *dao1-1* mutant accumulates significantly less OxIAA and more amino acid conjugates (IAAsp and IAGlu). **(A-C)** Endogenous hormone contents. **(A)** OxIAA, (B) indole-3-acetyl-L-aspartic acid (IAAsp) and **(C)** indole-3-acetyl glutamic acid (IAGlu) were quantified in the hypocotyls of wild-type and *dao1-1* mutant seedlings grown in the dark until the hypocotyl reached ~ 6 mm long (T0) and after their transfer to the light for 9 h (T9), 24 h (T24) or 72 h (T72). Error bars indicate ± SD of six biological replicates. Asterisks indicate statistically significant difference in the mutant lines versus the wild type (Col-0) in an ANOVA analysis (*, **, and *** correspond to P-values of $0.05 > p > 0.01$, $0.01 > p > 0.001$, and $p < 0.001$, respectively). <LOD means under the limit of detection.

Table 1: list of primers used in qRT-PCR and genotyping

Gene name	**Gene number**	**Forward primer**	**Reverse primer**
GH3.3	At1g77850	ACAATTCCGCTCCACAGTTC	ACGAGTTCCTTGCTCTCCAA
GH3.5	At4g27260	GTCTTCGAGGACTGCTGCTT	ATGTCCCTGGCTCAACAATC
GH3.6	At5g54510	CCTTGTTCCGTTTGATGCTT	CGTGTTACCGTTCAAGCAGA
OPR3	At2G06050	TGGTTGGCATGCTCAATAAG	GCCTTCCAGACTCTGTTTGC
AOC2	At3G25770	GGTGCCTACGGACAGGTCAAGC	GCGGTACCGGTGTTCCGGTG
TIP41	At4g34270	GCTCATCGGTACGCTCTTTT	TCCATCAGTCAGAGGCTTCC
dao2C	At1g14120	TTGCTTGACTAGAGAAAAGCCTT	TTGGCTTGGCCATCCTCTCA
U626-ID		TGTCCCAGGATTAGAATGATTAGGC	AGCCCTCTTCTTTCGATCCATCAAC