# Natural Variation in Herbivore-Induced Volatiles in *Arabidopsis thaliana*

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## Supplementary material

**Table S1.** Characteristics of the identified induced volatile compounds in headspace of *Arabidopsis thaliana* leaves after *Pieris rapae* herbivory or jasmonic acid treatment.

| **Compound** | **Retention index** | ***m/z* fragment used for quantification** |
|---|---|---|
| pentan-2-ol | 732 | 45 |
| 2-heptene | 735 | 55 |
| (*E*)-3-penten-2-one | 735 | 69 |
| 2-pentenal | 758 | 55 |
| 1-pentanol | 767 | 42 |
| (*E*)-3-hexenal | 770 | 41 |
| (*Z*)-2-penten-1-ol | 771 | 57 |
| (*E*)-3-penten-2-ol | 774 | 71 |
| (Z)-3-hexenal | 796 | 41 |
| hexan-2-ol | 801 | 45 |
| (*E*)-3-hexen-1ol | 851 | 41 |
| (*E*)-2-hexenal | 853 | 41 |
| (*Z*)-3-hexen-1-ol | 853 | 67 |
| hexanol | 868 | 56 |
| hexanal | 878 | 44 |

| | | |
|---|---|---|
| 1-nonene | 892 | 56 |
| 4-methyl-3-penten-2-one | 892 | 83 |
| heptanal | 900 | 70 |
| heptan-2-ol | 908 | 45 |
| (*E*,*E*)-2,4-hexadienal, | 910 | 81 |
| α-pinene | 939 | 93 |
| 1-octen-3-ol | 943 | 57 |
| benzaldehyde | 965 | 77 |
| trans pinane | 974 | 55 |
| 1-octen-1-ol | 977 | 57 |
| 6-methyl-5-hepten-2-one | 989 | 69 |
| β-myrcene | 995 | 93 |
| octanal | 1000 | 43 |
| (*E*)-hexenyl acetate | 1006 | 43 |
| α-phellandrene | 1007 | 93 |
| (*Z*)-3-hexenyl acetate | 1010 | 43 |
| 3-carene | 1010 | 93 |
| α-terpinene | 1017 | 93 |
| limonene | 1033 | 93 |
| (*Z*)-β-ocimene | 1040 | 93 |
| (*E*)-β-ocimene | 1052 | 93 |
| γ-terpinene | 1062 | 93 |
| acetophenone | 1068 | 105 |
| hexanoic acid | 1085 | 60 |
| terpinolene | 1093 | 93 |
| linalool | 1099 | 93 |
| nonanal | 1109 | 57 |
| DMNT[1] | 1114 | 69 |
| allo-ocimene | 1129 | 69 |

| | | |
|---|---|---|
| β-sesquiphellandrene | 1149 | 69 |
| α-terpineol | 1186 | 59 |
| MeSA[3] | 1193 | 92+120+150 |
| verbenone | 1204 | 107 |
| decanal | 1207 | 57 |
| nerol | 1225 | 69 |
| β-citral | 1239 | 69 |
| pulegone | 1240 | 81 |
| ethylsalicylate | 1248 | 120 |
| geraniol | 1255 | 69 |
| indole | 1292 | 117 |
| α-copaene | 1378 | 161 |
| β-elemene | 1379 | 81 |
| (*E*)-β-caryophyllene | 1420 | 93 |
| thujopsene | 1431 | 119 |
| geranyl acetone | 1454 | 69 |
| α-himachalene | 1454 | 93 |
| α-humulene | 1454 | 107 |
| (*E*)-β-farnesene | 1464 | 69 |
| β-acoradiene | 1464 | 119 |
| β-chamigrene | 1484 | 189 |
| β-ionone | 1486 | 121 |
| cuparene | 1506 | 132 |
| (*E*,*E*)-α-farnesene | 1509 | 93 |
| β-bisabolene | 1510 | 69 |
| (*Z*)-nerolidol | 1535 | 69 |
| geranylisovalerate | 1553 | 85 |
| (*E*)-nerolidol | 1564 | 69 |

| | | |
|---|---|---|
| TMTT[2] | 1590 | 69 |

[1], (*E*)-4,8-dimethyl-1,3,7-nonatriene

[2], (*E*,*E*)-4,8,12-trimethyltrideca-1,3,7,11-tetraene

[3], methyl salicylate

**Table S2.** Sequences of *Arabidopsis thaliana*-derived primers used in quantitative Real Time-PCR analyses.

| ***Gene*** | ***AGI-codes*** | ***Forward primer (5' → 3')*** | ***Reverse primer (5' → 3')*** |
|---|---|---|---|
| *β-Actin* | At3g46520 | GGAGAAGATTTGGCATCACAC | TGGCAACATACATAGCAGGAG |
| *HPL1* | At4g15440 | ACATCGCTGAGAACGGTTG | CAAGAGGCTGAGGAACTACG |
| *BSMT1* | At3g11480 | TGGTCACTACTACGAAGAAGATG | GAGCATTGGTTCACTAACAGC |
| *TPS03* | At4g16740 | GCCACCATCCTCCGTCTC | CCAAGCCACACCGATAATTCC |
| *TPS04* | At1g61120 | TCGCAGCACACACCATTG | GAGCAGCACGGAGTTCATC |
| *CYP72A13* | At3g14660 | GATGGCAATGACACTGATTCTAC | GATAAGAGGAGCACCGAACTG |
| *CYP82G1* | At3g25180 | ATCAGACAGCACATCCATCAC | GCCGACACTATTATCAATCTCTTC |

**Table S3.** Results of one-way ANOVA for each compound on differences between JA and *Pieris rapae* treatment. For each accession the volatile compounds that are emitted in significantly different (ANOVA) rates between both treatments ((*Pieris rapae* infestation (Pr) and JA-treatment (JA)). F- and *P*-values (Sig.) are given.

| **An-1** | **Treatment with higher average emission rate:** | | **F** | **Sig.** |
|---|---|---|---|---|
| (*E*)-2-hexenal | Pr | | 9.170 | 0.016 |
| trans pinane | Pr | | 9.305 | 0.016 |
| ß-myrcene | | JA | 11.714 | 0.009 |
| α-terpineol | Pr | | 9.712 | 0.014 |
| ß-acoradiene | Pr | | 11.409 | 0.010 |
| (*E*)-nerolidol | | JA | 9.207 | 0.016 |
| TMTT[1] | | JA | 5.632 | 0.045 |
| | | | | |
| **Col-0** | **Treatment with higher average emission rate:** | | **F** | **Sig.** |
| DMNT[2] | Pr | | 10.059 | 0.010 |
| MeSA[3] | Pr | | 102.577 | 0.000 |
| | | | | |
| **C-24** | **Treatment with higher average emission rate:** | | **F** | **Sig.** |
| pentan-2-ol | | JA | 15.933 | 0.004 |
| (*E*)-2-hexenal | Pr | | 52.706 | 0.000 |
| 4-Me-3-penten-2-one | | JA | 17.129 | 0.003 |
| benzaldehyde | | JA | 8.315 | 0.020 |
| (*E*)-ß-ocimene | | JA | 7.592 | 0.025 |
| ß-sesquiphellandrene | | JA | 6.925 | 0.030 |
| α-terpineol | | JA | 14.910 | 0.005 |

| | | | | |
|---|---|---|---|---|
| MeSA[3] | Pr | | 10.119 | 0.013 |
| nerol | | JA | 50.385 | 0.000 |
| ethylsalicylate | Pr | | 12.938 | 0.007 |
| indole | | JA | 448.516 | 0.000 |
| ß-elemene | | JA | 6.791 | 0.031 |
| ß-farnesene | | JA | 57.984 | 0.000 |
| (*E*)-nerolidol | | JA | 10.805 | 0.011 |
| | | | | |
| **Cvi** | **Treatment with higher average emission rate:** | | **F** | **Sig.** |
| (*E*)-3-hexenal | Pr | | 14.663 | 0.005 |
| (*Z*)-2-penten-1-ol | | JA | 6.614 | 0.033 |
| (*Z*)-3-hexenal | Pr | | 7.115 | 0.028 |
| (*E*)-2-hexenal | Pr | | 7.892 | 0.023 |
| trans pinane | Pr | | 5.357 | 0.049 |
| α-phellandrene | Pr | | 21.808 | 0.002 |
| (*Z*)-hexenyl acetate | Pr | | 10.514 | 0.012 |
| 3-carene | | JA | 13.407 | 0.006 |
| limonene | Pr | | 28.407 | 0.001 |
| (*Z*)-ß-ocimene | | JA | 8.471 | 0.020 |
| acetophenone | | JA | 9.238 | 0.016 |
| MeSA[3] | Pr | | 24.951 | 0.001 |
| ß-farnesene | Pr | | 6.445 | 0.035 |
| (*E*)-nerolidol | | JA | 7.072 | 0.029 |
| | | | | |
| **Eri-1** | **Treatment with higher average emission rate:** | | **F** | **Sig.** |
| 2-pentanal | Pr | | 18.740 | 0.003 |
| (E)-2-hexenal | | JA | 14.719 | 0.005 |

| | | | | |
|---|---|---|---|---|
| (*Z*)-3-hexen-1-ol | Pr | | 5.484 | 0.047 |
| 1-octen-1-ol | Pr | | 7.716 | 0.024 |
| ß-myrcene | | JA | 10.475 | 0.012 |
| linalool | Pr | | 8.715 | 0.018 |
| MeSA[3] | Pr | | 61.541 | 0.000 |
| nerol | Pr | | 6.343 | 0.036 |
| α-farnesene | | JA | 30.832 | 0.001 |
| ß-bisbolene | | JA | 7.450 | 0.026 |
| | | | | |
| **Kond** | **Treatment with higher average emission rate:** | | **F** | **Sig.** |
| (*Z*)-3-hexen-1-ol | Pr | | 17.445 | 0.003 |
| hexanol | Pr | | 5.420 | 0.048 |
| ß-myrcene | | JA | 32.530 | 0.000 |
| (*Z*)-ß-ocimene | | JA | 6.367 | 0.036 |
| verbenone | | JA | 6.500 | 0.034 |
| decanal | | JA | 17.427 | 0.003 |
| (*Z*)-nerolidol | | JA | 10.927 | 0.011 |
| | | | | |
| **Kyo-1** | **Treatment with higher average emission rate:** | | **F** | **Sig.** |
| (Z)-nerolidol | | JA | 15.012 | 0.005 |
| | | | | |
| **L*er*** | **Treatment with higher average emission rate:** | | **F** | **Sig.** |
| ß-myrcene | Pr | | 9.877 | 0.014 |
| (*E*)-hexenyl acetate | Pr | | 19.068 | 0.002 |
| (*Z*)-ß-ocimene | Pr | | 8.886 | 0.018 |

| | | | | |
|---|---|---|---|---|
| hexanoic acid | Pr | | 5.999 | 0.040 |
| ethylsalicylate | | JA | 6.290 | 0.036 |
| | | | | |
| **WS** | **Treatment with higher average emission rate:** | | **F** | **Sig.** |
| (*E*,*E*)-2,4-hexadienal | | JA | 12.120 | 0.006 |
| (*Z*)-hexenyl acetate | | JA | 5.309 | 0.044 |
| linalool | | JA | 5.361 | 0.043 |
| geranyl acteone | | JA | 6.643 | 0.028 |
| α-farnesene | | JA | 5.447 | 0.042 |

[1], (*E*,*E*)-4,8,12-trimethyltrideca-1,3,7,11-tetraene

[2], (*E*)-4,8-dimethyl-1,3,7-nonatriene

[3], methyl salicylate

**Table S4.** Volatile compounds that are emitted in significantly different rates among nine accessions of *Arabidopsis thaliana* treated with JA, infested with 20 first instar larvae of *Pieris rapae* or left untreated (control). Individual volatiles were analyzed for significant differences between accessions within one treatment, by using one-way ANOVA followed by a Dunnett T3 post-hoc analysis. Significance: * $P<0.05$; ** $P<0.01$; *** $P<0.001$.

| **Compound** | **Control** | **Sign.** | ***P. rapae*** | **Sign.** | **JA** | **Sign.** |
|---|---|---|---|---|---|---|
| **(*E*)-2-hexenal** | | | An-1 > L*er* | * | | |
| | | | C-24 > L*er* | * | | |
| **(*E*)-3-hexenal** | WS > Col-0 | ** | | | | |
| | WS > C-24 | * | | | | |
| **(*Z*)-hexenyl acetate** | | | Cvi > An-1 | *** | | |
| | | | Cvi > C-24 | *** | | |
| **(*Z*)-2-penten-1-ol** | WS > Col-0 | * | | | | |
| **3-hexen-1-ol** | | | An-1 > Col-0 | *** | | |
| | | | An-1 > Cvi | * | | |
| | | | Cvi > Col-0 | * | | |
| | | | Eri-1 > Col-0 | ** | | |
| | | | Kond > C-24 | * | | |
| | | | Kond > Col-0 | *** | | |
| | | | Kond > Cvi | ** | | |
| | | | WS > Col-0 | *** | | |
| | | | WS > Cvi | * | | |
| **hexanoic acid** | C-24 > L*er* | *** | | | | |
| **pentan-2-ol** | C-24 > Kyo-1 | * | | | | |
| | Cvi > Kyo-1 | * | | | | |
| **(*E*)-nerolidol** | C-24 > Col-0 | * | Col-0 > WS | * | | |
| | | | Kond > WS | * | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| **(*E*)-ß-ocimene** | | | Kond > C-24 | *** | An-1 > Col-0 | * |
| | | | Kond > Col-0 | ** | An-1 > Kyo-1 | ** |
| | | | WS > Col-0 | * | C-24 > Kyo-1 | * |
| | | | WS > C-24 | ** | Cvi > Kyo-1 | * |
| | | | | | Eri-1 > Kyo-1 | * |
| | | | | | Kond > Col-0 | *** |
| | | | | | Kond > Cvi | * |
| | | | | | Kond > Eri-1 | *** |
| | | | | | Kond > Kyo-1 | *** |
| | | | | | WS > Col-0 | *** |
| | | | | | WS > Eri-1 | ** |
| | | | | | WS > Kyo-1 | *** |
| **(*Z*)-ß-ocimene** | Kond > An-1 | ** | An-1 > Col-0 | * | An-1 > Kyo-1 | * |
| | Kond > Cvi | * | Kond > Col-0 | * | C-24 > Col-0 | * |
| | | | L*er* > C-24 | * | C-24 > Kyo-1 | * |
| | | | L*er* > Col-0 | ** | Cvi > Col-0 | * |
| | | | WS > Col-0 | * | Cvi > Kyo-1 | ** |
| | | | WS > C-24 | * | Kond > Col-0 | ** |
| | | | | | Kond > Eri-1 | * |
| | | | | | Kond >Kyo-1 | *** |
| | | | | | Kond > L*er* | * |
| | | | | | WS > Col-0 | * |
| | | | | | WS > Kyo-1 | ** |
| **3-carene** | An-1 > Col-0 | *** | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| **ß -acoradiene** | | | Cvi > Kyo-1 | * | | |
| **DMNT** | C-24 > Col-0 | *** | | | C-24 > Col-0 | ** |
| | Kond > Col-0 | *** | | | Kond > Col-0 | * |
| | WS > Col-0 | ** | | | WS > Col-0 | *** |
| **ß-bisabolene** | | | An-1 > Kond | *** | C-24 > WS | * |
| | | | C-24 > Kond | *** | Eri-1 > WS | * |
| | | | Kyo-1 >Kond | *** | | |
| **ß-farnesene** | Col-0 > L*er* | ** | Col-0 > C-24 | *** | | |
| | Kond > L*er* | * | Cvi > C-24 | * | | |
| | | | Cvi > C-24 | * | | |
| | | | Kond > C-24 | ** | | |
| | | | Kyo-1 > C-24 | *** | | |
| | | | WS > C-24 | * | | |
| **ß-myrcene** | | | Cvi > An-1 | * | Cvi > An-1 | * |
| | | | Eri-1 > An-1 | * | Cvi > Col-0 | * |
| | | | Kond > An-1 | * | Cvi > L*er* | * |
| | | | L*er* > An-1 | * | Eri-1 > Col-0 | * |
| **ß-myrcene** | | | | | Eri-1 > L*er* | * |
| | | | | | Kond > An-1 | *** |
| | | | | | Kond > C-24 | ** |
| | | | | | Kond > Col-0 | *** |
| | | | | | Kond > L*er* | ** |
| | | | | | Kond > WS | * |
| **ß-sesquiphellandrene** | | | An-1 > Eri-1 | * | An-1 > Cvi | * |
| | | | An-1 > Col-0 | * | An-1 > Eri-1 | * |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | | | | |
| | | | An-1 > C-24 | * | Kond > Cvi | * |
| | | | | | Kond > Eri-1 | * |
| **TMTT** | | | Col-0 > C-24 | ** | An-1 > Cvi | * |
| | | | Col-0 > Cvi | ** | Kond > Cvi | ** |
| | | | Kond > C-24 | * | Kyo-1 > Cvi | *** |
| | | | Kond > Cvi | * | L*er* > Cvi | ** |
| | | | WS > Cvi | ** | | |
| | | | WS > C-24 | * | | |
| **α-farnesene** | | | An-1 > Cvi | ** | Eri-1 > C-24 | ** |
| | | | An-1 > Col-0 | * | Eri-1 > WS | ** |
| | | | An-1 > C-24 | * | Kond > C-24 | * |
| | | | Eri-1 > Cvi | ** | | |
| | | | Kyo-1 > C-24 | * | | |
| | | | Kyo-1 > Col-0 | * | | |
| | | | Kyo-1 > Cvi | *** | | |
| | | | Kyo-1 > L*er* | * | | |
| **α-humulene** | | | C-24 > Kyo-1 | ** | | |
| **α-phellandrene** | Cvi > Col-0 | * | | | | |
| | Kond > Col-0 | * | | | | |
| **α-pinene** | | | | | Kond > An-1 | * |
| | | | | | L*er* > An-1 | * |
| **benzaldehyde** | | | An-1 > C-24 | ** | | |
| | | | Col-0> C-24 | * | | |
| | | | Kond > C-24 | * | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | L*er* > C-24 | ** | | |
| **decanal** | | | Col-0 > An-1 | * | | |
| | | | Col-0 > Cvi | * | | |
| | | | Eri-1 > An-1 | * | | |
| | | | Eri-1 > Cvi | * | | |
| | | | WS > An-1 | *** | | |
| | | | WS > Cvi | ** | | |
| **ethylsalicylate** | | | | | Cvi > An-1 | *** |
| | | | | | Cvi > Eri-1 | *** |
| | | | | | L*er* > An-1 | *** |
| | | | | | L*er* > Eri-1 | *** |
| **geranyl acetone** | | | Kond > Col-0 | * | WS > Eri-1 | * |
| **indole** | | | Cvi > C-24 | *** | | |
| **MeSA** | An-1 > WS | * | An-1 > Eri-1 | * | Col-0 > Cvi | *** |
| | Eri-1 > WS | * | An-1 > Kond | ** | Col-0 > Eri-1 | * |
| | Kyo-1 > WS | ** | An-1 > Kyo-1 | * | Kond > Cvi | ** |
| | | | An-1 > Cvi | *** | Kyo-1 > Cvi | ** |
| | | | C-24 > Cvi | *** | L*er* > Cvi | *** |
| | | | Col-0 > Cvi | *** | L*er* > Eri-1 | ** |
| | | | Col-0 > Eri-1 | * | L*er* > Kond | * |
| | | | Col-0 > Kond | ** | L*er* > Kyo-1 | * |
| | | | Col-0 > Kyo-1 | * | WS > Cvi | *** |
| | | | Eri-1 > C-24 | *** | Ws > Eri-1 | ** |
| | | | Kyo-1 > Cvi | ** | | |
| | | | L*er* > Cvi | *** | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | L*er* > Kond | * | | |
| | | | WS > Cvi | *** | | |

**Table S5.** Significant differences in headspace among accessions after either treatment or left non-treated. One-way ANOVA followed by Dunnett T3 results for 9 *Arabidopsis thaliana* accessions for each volatile compound.

| ***Pieris rapae*** | | | | | |
|---|---|---|---|---|---|
| **Geno I** | **>Geno J** | **Compound** | **Mean[1] Difference (I-J)** | **Std. Error** | **Sign.** |
| An-1 | > Col-0 | 3-hexen-1ol | 1.945 | 0.120 | <0.001 |
| | | (*Z*)-ß-ocimene | 0.789 | 0.183 | 0.045 |
| | | ß-sesquiphellandrene | 1.149 | 0.256 | 0.042 |
| | | α-farnesene | 1.116 | 0.243 | 0.038 |
| | > C24 | benzaldehyde | 1.448 | 0.226 | 0.006 |
| | | ß-sesquiphellandrene | 1.262 | 0.285 | 0.047 |
| | | α-farnesene | 1.314 | 0.297 | 0.049 |
| | > Cvi | 3-hexen-1ol | 0.900 | 0.174 | 0.024 |
| | | MeSA | 1.704 | 0.128 | <0.001 |
| | | α-farnesene | 1.724 | 0.225 | 0.003 |
| | > Eri-1 | ß-sesquiphellandrene | 1.280 | 0.240 | 0.022 |
| | | MeSA | 0.524 | 0.103 | 0.026 |
| | > Kond | MeSA | 1.152 | 0.149 | 0.002 |
| | | ß-bisbolene | 7.448 | 0.226 | <0.001 |
| | > Kyo-1 | MeSA | 0.808 | 0.140 | 0.012 |
| | > L*er* | (*E*)-2-hexenal | 7.080 | 1.226 | 0.045 |
| Col-0 | > An-1 | decanal | 1.352 | 0.256 | 0.027 |
| | > Cvi | MeSA | 1.602 | 0.106 | <0.001 |
| | | decanal | 1.145 | 0.285 | 0.019 |
| | > Eri-1 | MeSA | 0.422 | 0.074 | 0.013 |
| | > C24 | benzaldehyde | 1.155 | 0.192 | 0.024 |

| | | | | | |
|---|---|---|---|---|---|
| | | ß-farnesene | 1.043 | 0.067 | <0.001 |
| | | TMTT | 1.454 | 0.252 | 0.008 |
| | > Cvi | TMTT | 1.558 | 0.240 | 0.005 |
| | > Kond | MeSA | 1.050 | 0.130 | 0.008 |
| | > Kyo-1 | MeSA | 0.706 | 0.120 | 0.030 |
| | > WS | (*E*)-nerolidol | 6.193 | 1.194 | 0.047 |
| C24 | > Cvi | MeSA | 1.182 | 0.135 | 0.001 |
| | > Kond | ß-bisbolene | 7.166 | 0.312 | <0.001 |
| | > Kyo-1 | α-humulene | 1.294 | 0.170 | 0.002 |
| | > L*er* | (*E*)-2-hexenal | 7.148 | 1.202 | 0.047 |
| Cvi | > An-1 | ß-myrcene | 0.836 | 0.160 | 0.019 |
| | | (*Z*)-hexenyl acetate | 1.442 | 0.126 | <0.001 |
| | > Col-0 | 3-hexen-1ol | 1.045 | 0.155 | 0.012 |
| | > C24 | (*Z*)-hexenyl acetate | 1.620 | 0.163 | 0.001 |
| | | indole | 6.170 | 0.312 | 0.001 |
| | | ß-farnesene | 1.104 | 0.144 | 0.018 |
| | | ß-farnesene | 1.104 | 0.144 | 0.018 |
| | > Kyo-1 | ß-acoradiene | 0.564 | 0.119 | 0.032 |
| Eri-1 | > An-1 | decanal | 1.066 | 0.218 | 0.050 |
| | | ß-myrcene | 0.622 | 0.138 | 0.044 |
| | > Col-0 | 3-hexen-1ol | 1.899 | 0.180 | 0.002 |
| | > C24 | MeSA | 1.180 | 0.115 | 0.001 |
| | > Cvi | decanal | 1.164 | 0.251 | 0.040 |
| | | α-farnesene | 1.286 | 0.183 | 0.003 |
| Kond | > An-1 | ß-myrcene | 0.846 | 0.156 | 0.015 |
| | > Col-0 | 3-hexen-1ol | 2.313 | 0.156 | <0.001 |
| | | (*Z*)-ß-ocimene | 1.005 | 0.196 | 0.016 |
| | | (*E*)-ß-ocimene | 1.202 | 0.183 | 0.007 |
| | | geranyl acetone | 6.275 | 1.150 | 0.041 |

| | | | | | |
|---|---|---|---|---|---|
| | > C24 | 3-hexen-1ol | 2.334 | 0.426 | 0.041 |
| | | benzaldehyde | 1.158 | 0.213 | 0.020 |
| | | (*E*)-ß-ocimene | 1.274 | 0.108 | <0.001 |
| | | ß-farnesene | 1.096 | 0.084 | 0.002 |
| | | TMTT | 1.188 | 0.231 | 0.022 |
| | > Cvi | 3-hexen-1ol | 1.268 | 0.201 | 0.005 |
| | | TMTT | 1.292 | 0.218 | 0.012 |
| | > WS | (*E*)-nerolidol | 6.190 | 1.187 | 0.048 |
| Kyo-1 | > Col-0 | α-farnesene | 1.106 | 0.205 | 0.011 |
| | > C24 | ß-farnesene | 1.048 | 0.687 | 0.001 |
| | | α-farnesene | 1.304 | 0.266 | 0.040 |
| | > Cvi | MeSA | 0.896 | 0.149 | 0.008 |
| | | α-farnesene | 1.714 | 0.183 | <0.001 |
| | > Kond | ß-bisbolene | 5.790 | 0.343 | 0.001 |
| | > L*er* | α-farnesene | 1.096 | 0.233 | 0.040 |
| L*er* | > An-1 | ß-myrcene | 0.834 | 0.151 | 0.013 |
| | > Col-0 | (*Z*)-ß-ocimene | 0.955 | 0.157 | 0.009 |
| | > C24 | benzaldehyde | 1.380 | 0.207 | 0.008 |
| | > Cvi | (Z)-ß-ocimene | 0.524 | 0.096 | 0.014 |
| | | MeSA | 1.400 | 0.128 | <0.001 |
| | > Kond | MeSA | 0.848 | 0.149 | 0.015 |
| WS | > An-1 | decanal | 1.492 | 0.129 | <0.001 |
| | > Col-0 | 3-hexen-1ol | 1.962 | 0.169 | <0.001 |
| | > C24 | (Z)-ß-ocimene | 0.870 | 0.149 | 0.017 |
| | | (*E*)-ß-ocimene | 1.008 | 0.210 | 0.021 |
| | > Cvi | (*Z*)-ß-ocimene | 0.439 | 0.082 | 0.015 |
| | | (*E*)-ß-ocimene | 1.080 | 0.149 | 0.002 |
| | | ß-farnesene | 0.918 | 0.132 | 0.014 |
| | | TMTT | 0.917 | 0.196 | 0.030 |

| | | | | | |
|---|---|---|---|---|---|
| | | 3-hexen-1ol | 0.917 | 0.211 | 0.042 |
| | | MeSA | 1.273 | 0.163 | 0.001 |
| | | decanal | 1.590 | 0.179 | 0.002 |
| **jasmonic acid** | | | | | |
| **Geno I** | **>Geno J** | **Compound** | **Mean[1] Difference (I-J)** | **Std. Error** | **Sign.** |
| An-1 | > Col-0 | (*E*)-ß-ocimene | 0.957 | 0.192 | 0.031 |
| | > Cvi | ß-sesquiphellandrene | 1.068 | 0.224 | 0.031 |
| | | TMTT | 0.828 | 0.148 | 0.027 |
| | > Eri-1 | ß-sesquiphellandrene | 0.892 | 0.192 | 0.043 |
| | > Kyo-1 | (*Z*)-ß-ocimene | 1.052 | 0.143 | 0.012 |
| | | (*E*)-ß-ocimene | 1.392 | 0.205 | 0.004 |
| Col-0 | > Cvi | MeSA | 1.505 | 0.573 | <0.001 |
| | > Eri-1 | MeSA | 1.253 | 0.180 | 0.020 |
| C24 | > Col-0 | (*Z*)-ß-ocimene | 0.980 | 0.229 | 0.049 |
| | | DMNT | 1.672 | 0.257 | 0.004 |
| | > Kyo-1 | (*Z*)-ß-ocimene | 1.082 | 0.145 | 0.011 |
| | | (*E*)-ß-ocimene | 1.098 | 0.227 | 0.037 |
| | > WS | ß-bisbolene | 5.974 | 1.154 | 0.039 |
| Cvi | > An-1 | ß-myrcene | 0.638 | 0.126 | 0.025 |
| | | ethylsalicylate | 5.564 | 0.343 | 0.001 |
| | > Col-0 | ß-myrcene | 0.885 | 0.168 | 0.014 |
| | | (Z)-ß-ocimene | 1.176 | 0.231 | 0.017 |
| | > Eri-1 | ethylsalicylate | 5.564 | 0.343 | 0.001 |
| | > Kyo-1 | (*Z*)-ß-ocimene | 1.278 | 0.148 | 0.006 |
| | > Kyo-1 | (*E*)-ß-ocimene | 1.108 | 0.199 | 0.013 |
| | > L*er* | ß-myrcene | 0.734 | 0.147 | 0.024 |
| Eri-1 | > Col-0 | ß-myrcene | 0.969 | 0.198 | 0.022 |

| | | | | | |
|---|---|---|---|---|---|
| | > C24 | α-farnesene | 1.478 | 0.215 | 0.003 |
| | > Kyo-1 | (*E*)-ß-ocimene | 0.816 | 0.154 | 0.023 |
| | > L*er* | ß-myrcene | 0.818 | 0.180 | 0.047 |
| | > WS | α-farnesene | 1.205 | 0.209 | 0.007 |
| | | ß-bisbolene | 7.034 | 1.140 | 0.019 |
| Kond | > An-1 | α-pinene | 0.686 | 0.115 | 0.021 |
| | | ß-myrcene | 1.110 | 0.091 | <0.001 |
| | > Col-0 | ß-myrcene | 1.357 | 0.144 | 0.001 |
| | | (*Z*)-ß-ocimene | 1.682 | 0.197 | 0.002 |
| | | (*E*)-ß-ocimene | 1.531 | 0.115 | <0.001 |
| | | DMNT | 0.950 | 0.189 | 0.023 |
| | > C24 | ß-myrcene | 1.250 | 0.149 | 0.007 |
| | | α-farnesene | 1.266 | 0.244 | 0.019 |
| | > Cvi | (*E*)-ß-ocimene | 0.858 | 0.160 | 0.049 |
| | | ß-sesquiphellandrene | 1.208 | 0.240 | 0.023 |
| | | MeSA | 1.074 | 0.099 | 0.002 |
| | | TMTT | 1.386 | 0.179 | 0.008 |
| | > Eri-1 | (*Z*)-ß-ocimene | 0.954 | 0.165 | 0.024 |
| | | (*E*)-ß-ocimene | 1.150 | 0.099 | <0.001 |
| | | ß-sesquiphellandrene | 1.032 | 0.210 | 0.037 |
| | > Kyo-1 | (*Z*)-ß-ocimene | 1.784 | 0.085 | <0.001 |
| Kond | > Kyo-1 | (*E*)-ß-ocimene | 1.966 | 0.136 | <0.001 |
| | > L*er* | ß-myrcene | 1.206 | 0.118 | 0.002 |
| | | (*Z*)-ß-ocimene | 0.962 | 0.175 | 0.033 |
| | > WS | ß-myrcene | 0.857 | 0.143 | 0.017 |
| Kyo-1 | > Cvi | MeSA | 1.078 | 0.139 | 0.012 |
| | | TMTT | 1.108 | 0.099 | <0.001 |
| L*er* | > An-1 | α-pinene | 0.732 | 0.134 | 0.039 |
| | | ethylsalicylate | 6.228 | 0.153 | <0.001 |

| | | | | | |
|---|---|---|---|---|---|
| | > Cvi | MeSA | 1.900 | 0.120 | <0.001 |
| | | TMTT | 1.592 | 0.201 | 0.009 |
| | > Eri-1 | MeSA | 1.648 | 0.208 | 0.002 |
| | | ethylsalicylate | 6.228 | 0.153 | <0.001 |
| | > Kond | MeSA | 0.826 | 0.147 | 0.013 |
| | > Kyo-1 | MeSA | 0.822 | 0.176 | 0.037 |
| WS | >Col-0 | (*Z*)-ß-ocimene | 1.257 | 0.242 | 0.011 |
| | | (*E*)-ß-ocimene | 1.298 | 0.154 | <0.001 |
| | | DMNT | 1.412 | 0.196 | 0.001 |
| | > Cvi | MeSA | 1.585 | 0.136 | 0.001 |
| | > Eri-1 | (*E*)-ß-ocimene | 0.918 | 0.142 | 0.003 |
| | | MeSA | 1.333 | 0.218 | 0.007 |
| | | geranyl acetone | 6.608 | 1.108 | 0.039 |
| | > Kyo-1 | (*Z*)-ß-ocimene | 1.359 | 0.164 | 0.004 |
| | | (*E*)-ß-ocimene | 1.734 | 0.170 | <0.001 |
| **Control** | | | | | |
| **Geno I** | **> Geno J** | **Compound** | **Mean[1] Difference (I-J)** | **Std. Error** | **Sign.** |
| An-1 | > Col-0 | 3-carene | 5.740 | 0.199 | <0.001 |
| | > WS | MeSA | 1.031 | 0.201 | 0.036 |
| Col-0 | > L*er* | ß-farnesene | 0.922 | 0.155 | 0.007 |
| C24 | > Col-0 | DMNT | 1.030 | 0.155 | 0.001 |
| | | (*E*)-nerolidol | 5.887 | 1.125 | 0.039 |
| | > Kyo-1 | pentan-2-ol | 5.232 | 1.133 | 0.042 |
| | > L*er* | hexanoic acid | 6.540 | 0.087 | <0.001 |
| Cvi | > Col-0 | α-phellandrene | 5.557 | 1.042 | 0.045 |
| | > Kyo-1 | pentan-2-ol | 5.518 | 1.122 | 0.032 |
| Eri-1 | > WS | MeSA | 0.789 | 0.171 | 0.045 |

| | | | | | |
|---|---|---|---|---|---|
| Kond | > An-1 | (*Z*)-ß-ocimene | 1.073 | 0.175 | 0.004 |
| | > Col-0 | α-phellandrene | 5.479 | 1.042 | 0.048 |
| | | DMNT | 0.913 | 0.133 | 0.001 |
| | > Cvi | (*Z*)-ß-ocimene | 1.620 | 0.346 | 0.050 |
| | > L*er* | ß-farnesene | 0.748 | 0.163 | 0.029 |
| Kyo-1 | > WS | MeSA | 0.707 | 0.131 | 0.005 |
| WS | > Col-0 | (*E*)-3-hexanal | 1.757 | 0.280 | 0.009 |
| | | (*Z*) 2-penten-1-ol | 6.405 | 1.199 | 0.036 |
| | | DMNT | 0.902 | 0.153 | 0.005 |
| | > C24 | (*E*)-3-hexanal | 1.598 | 0.278 | 0.015 |

**Table S6.** Results of t-tests for each volatile compound on differences between non-treated plants and *P. rapae*-infested plants, and non-treated plants and JA-treated plants.

| P. rapae | | F | Sig.2tail | Jasmonic acid | | F | Sig.2tail |
|---|---|---|---|---|---|---|---|
| **An-1** | *(Z)*-ß-ocimene | 0,023 | 2,83E-06 | **An-1** | *(Z)*-ß-ocimene | 0,358 | 7,96E-06 |
| **An-1** | MeSA | 5,825 | 4,80E-04 | **An-1** | *(E)*-ß-ocimene | 0,009 | 4,28E-04 |
| **An-1** | α-farnesene | 0,014 | 0,001 | **An-1** | α-farnesene | 0,000 | 0,002 |
| **An-1** | geraniol | 2,570 | 0,003 | **An-1** | TMTT | 1,503 | 0,004 |
| **An-1** | α-terpineol | 4,333 | 0,005 | **An-1** | ß-sesquiphellandrene | 2,442 | 0,012 |
| **An-1** | DMNT | 4,379 | 0,010 | **An-1** | geraniol | 0,379 | 0,023 |
| **An-1** | ß-sesquiphellandrene | 1,620 | 0,011 | **An-1** | *(Z)*-nerolidol | 2,488 | 0,044 |
| **An-1** | *(E)*-ß-ocimene | 0,622 | 0,011 | **An-1** | ethylsalicylate | *44,108* | *0,075* |
| **An-1** | *(E)*-2-hexenal | 0,148 | 0,015 | **An-1** | DMNT | *2,074* | *0,078* |
| **An-1** | (*Z*)-3-hexen-1-ol | 85,282 | 0,044 | | | | |
| **An-1** | octanal | *0,337* | *0,059* | | | | |
| **An-1** | *(Z)*-2-penten-1-ol | *44,425* | *0,060* | | | | |
| **An-1** | nerol | *4,382* | *0,067* | | | | |
| **An-1** | 3-carene | *56,757* | *0,072* | | | | |
| **An-1** | geranylisovalerate | *1,025* | *0,084* | | | | |
| **An-1** | ß-elemene | *15,297* | *0,084* | | | | |
| **An-1** | allo ocimene | *5,898* | *0,085* | | | | |
| **An-1** | A-terpinene | *5,164* | *0,088* | | | | |
| **An-1** | ß-bisbolene | *62,390* | *0,089* | | | | |
| **Col-0** | MeSA | 4,207 | 2,32E-07 | **Col-0** | MeSA | 3,887 | 7,57E-06 |
| **Col-0** | *(E)*-nerolidol | 3,933 | 2,02E-04 | **Col-0** | *(Z)*-2-penten-1-ol | 3,806 | 1,60E-04 |
| **Col-0** | TMTT | 2,574 | 0,001 | **Col-0** | (*E*)-nerolidol | 4,810 | 2,10E-04 |
| **Col-0** | *(Z)*-ß-ocimene | 0,045 | 0,002 | **Col-0** | α-phellandrene | 0,000 | 0,018 |
| **Col-0** | DMNT | 0,471 | 0,004 | **Col-0** | TMTT | 1,359 | 0,045 |
| **Col-0** | linalool | *1,299* | *0,052* | **Col-0** | α-farnesene | 297,446 | 0,048 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Col-0** | (Z)-3-hexen-1-ol | *458,342* | *0,069* | **Col-0** | *(Z)*-ß-ocimene | *0,864* | *0,051* |
| **Col-0** | decanal | *0,418* | *0,069* | **Col-0** | 3-carene | *2.939,156* | *0,076* |
| **Col-0** | α-farnesene | *586,641* | *0,072* | | | | |
| **Col-0** | *(Z)*-2-penten-1-ol | *2,332* | *0,077* | | | | |
| **Col-0** | *(E)*-hexenyl acetate | *25,916* | *0,094* | | | | |
| **C-24** | pentan-2-ol | 6,816 | 4,41E-08 | **C-24** | *(E)*-ß-ocimene | 1,934 | 8,03E-06 |
| **C-24** | MeSA | 6,603 | 3,90E-06 | **C-24** | *(Z)*-ß-ocimene | 0,594 | 1,49E-04 |
| **C-24** | (*E*)-ß-ocimene | 0,214 | 8,48E-06 | **C-24** | MeSA | 0,165 | 0,002 |
| **C-24** | hexanoic acid | 3,265 | 5,23E-05 | **C-24** | DMNT | 0,156 | 0,014 |
| **C-24** | (*Z*)-ß-ocimene | 3,796 | 3,48E-04 | **C-24** | ethylsalicylate | 0,112 | 0,016 |
| **C-24** | *(E)*-2-hexenal | 0,496 | 4,28E-04 | **C-24** | (*E*)-hexenyl acetate | 0,158 | 0,027 |
| **C-24** | 4-me-3-penten-2-one | 3,446 | 0,002 | **C-24** | 6-me-5-hepten-2-one | 1,724 | 0,038 |
| **C-24** | 1-pentanol | 3,614 | 0,008 | **C-24** | ß-farnesene | *1,500* | *0,061* |
| **C-24** | indole | 16,298 | 0,009 | **C-24** | α-humulene | *0,296* | *0,098* |
| **C-24** | 11-octen-1-ol | 0,014 | 0,011 | | | | |
| **C-24** | α-terpineol | 3,710 | 0,013 | | | | |
| **C-24** | benzaldehyde | 0,103 | 0,016 | | | | |
| **C-24** | 6-me-5-hepten-2-one | 0,082 | 0,016 | | | | |
| **C-24** | *(E)*-nerolidol | 0,089 | 0,016 | | | | |
| **C-24** | α-humulene | 0,165 | 0,024 | | | | |
| **C-24** | ß-myrcene | 0,041 | 0,027 | | | | |
| **C-24** | ß-chamigrene | 1,980 | 0,031 | | | | |
| **C-24** | ß-farnesene | 9,643 | 0,035 | | | | |
| **C-24** | *(E)*-ß-caryophyllene | 0,100 | 0,040 | | | | |
| **C-24** | thujopsene | 31,742 | 0,042 | | | | |
| **C-24** | (*Z*)-3-hexen-1-ol | 0,540 | 0,049 | | | | |
| **C-24** | *(E)*-hexenyl acetate | *0,205* | *0,064* | | | | |
| **C-24** | ß-elemene | *1,867* | *0,076* | | | | |
| **Cvi** | *(Z)*-hexenyl acetate | 1,238 | 8,15E-07 | **Cvi** | *(Z)*-ß-ocimene | 1,580 | 7,33E-05 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Cvi** | *(Z)*-ß-ocimene | 0,957 | 0,001 | **Cvi** | *(E)*-ß-ocimene | 0,082 | 1,17E-04 |
| **Cvi** | trans pinane | 2,702 | 0,003 | **Cvi** | ß-myrcene | 2,246 | 4,22E-04 |
| **Cvi** | ß-myrcene | 0,834 | 0,004 | **Cvi** | linalool | 0,365 | 0,004 |
| **Cvi** | α-phellandrene | 0,097 | 0,005 | **Cvi** | *(Z)*-hexenyl acetate | 1,243 | 0,005 |
| **Cvi** | linalool | 0,785 | 0,007 | **Cvi** | 1-pentanol | 2,419 | 0,020 |
| **Cvi** | 1-pentanol | 0,466 | 0,014 | **Cvi** | *(E)*-nerolidol | 133,242 | 0,029 |
| **Cvi** | *(E)*-ß-ocimene | 1,801 | 0,016 | **Cvi** | α-phellandrene | 2,858 | 0,030 |
| **Cvi** | ß-acoradiene | 2,343 | 0,028 | **Cvi** | acetophenone | 1,304 | 0,035 |
| **Cvi** | ß-farnesene | 0,002 | 0,037 | **Cvi** | *(E)*-3-hexenal | *855,557* | *0,051* |
| **Cvi** | geranyl acteone | 61,472 | 0,042 | **Cvi** | 3-carene | *206,499* | *0,052* |
| **Cvi** | *(E)*-ß-caryophyllene | *1,701* | *0,059* | **Cvi** | *(Z)*-2-penten-1-ol | *26,958* | *0,055* |
| **Cvi** | benzaldehyde | *3,059* | *0,064* | **Cvi** | g terpinene | *1,559* | *0,057* |
| **Cvi** | α-terpinene | *0,065* | *0,065* | **Cvi** | geranyl acteone | *116,002* | *0,071* |
| **Cvi** | MeSA | *2,537* | *0,068* | | | | |
| **Cvi** | α-farnesene | *447,986* | *0,069* | | | | |
| **Cvi** | hexan-2-ol | *0,202* | *0,074* | | | | |
| **Cvi** | pentan-2-ol | *92,570* | *0,085* | | | | |
| **Cvi** | *(E)*-2-hexanal | *3,809* | *0,094* | | | | |
| **Cvi** | verbenone | *0,148* | *0,096* | | | | |
| **Cvi** | *(E)*-3-hexanal | *1.117,670* | *0,096* | | | | |
| **Cvi** | *(E)*-nerolidol | *42,628* | *0,100* | | | | |
| **Eri-1** | MeSA | 2,004 | 8,59E-05 | **Eri-1** | α-farnesene | 0,004 | 4,23E-06 |
| **Eri-1** | *(Z)*-ß-ocimene | 0,895 | 3,26E-04 | **Eri-1** | *(E)*-ß-ocimene | 2,622 | 0,002 |
| **Eri-1** | *(E)*-ß-ocimene | 0,023 | 0,001 | **Eri-1** | *(Z)*-ß-ocimene | 0,250 | 0,003 |
| **Eri-1** | α-farnesene | 0,059 | 0,001 | **Eri-1** | α-humulene | 0,336 | 0,005 |
| **Eri-1** | DMNT | 2,589 | 0,005 | **Eri-1** | DMNT | 1,995 | 0,006 |
| **Eri-1** | linalool | 0,778 | 0,011 | **Eri-1** | TMTT | 0,012 | 0,038 |
| **Eri-1** | TMTT | 0,124 | 0,022 | **Eri-1** | ß-bisbolene | *47,132* | *0,063* |
| **Eri-1** | α-humulene | 0,088 | 0,038 | **Eri-1** | ß-farnesene | *0,141* | *0,068* |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Eri-1** | (Z)-3-hexen-1-ol | *68,315* | *0,050* | **Eri-1** | ethylsalicylate | *60,631* | *0,073* |
| **Eri-1** | octanal | *74,681* | *0,071* | **Eri-1** | *(E)*-2-hexenal | *47,663* | *0,081* |
| **Eri-1** | heptanal | *0,250* | *0,076* | **Eri-1** | heptanal | *0,018* | *0,087* |
| | | | | **Eri-1** | ß-myrcene | *78,719* | *0,093* |
| **Kond** | *(E)*-ß-ocimene | 1,150 | 6,73E-06 | **Kond** | *(E)*-ß-ocimene | 3,553 | 1,63E-06 |
| **Kond** | *(Z)*-ß-ocimene | 0,022 | 2,57E-04 | **Kond** | *(Z)*-ß-ocimene | 2,020 | 5,03E-06 |
| **Kond** | *(Z)*-nerolidol | 0,220 | 0,001 | **Kond** | *(Z)*-nerolidol | 0,100 | 2,55E-05 |
| **Kond** | ß-bisbolene | 4,718 | 0,002 | **Kond** | ß-myrcene | 3,208 | 4,78E-04 |
| **Kond** | 2-pentanal | 0,182 | 0,007 | **Kond** | MeSA | 1,399 | 0,005 |
| **Kond** | MeSA | 0,428 | 0,007 | **Kond** | α-pinene | 0,581 | 0,025 |
| **Kond** | ß-elemene | 0,085 | 0,017 | **Kond** | ß-farnesene | 0,020 | 0,027 |
| **Kond** | *(E)*-hexenyl acetate | 1,274 | 0,020 | **Kond** | ß-bisbolene | 0,011 | 0,029 |
| **Kond** | 1-nonene | 4,542 | 0,032 | **Kond** | *(E)*-3-hexen-1-ol | 0,108 | 0,043 |
| **Kond** | ß-myrcene | 0,966 | 0,035 | **Kond** | ß-sesquiphellandrene | 0,020 | 0,045 |
| **Kond** | TMTT | *3,853* | *0,065* | **Kond** | α-farnesene | *3,265* | *0,062* |
| **Kond** | (Z)-3-hexen-1-ol | *26,140* | *0,065* | **Kond** | TMTT | *3,626* | *0,066* |
| **Kond** | A-pinene | *0,004* | *0,073* | **Kond** | α-phellandrene | *0,147* | *0,088* |
| **Kond** | *(E)*-3-hexenal | *21,423* | *0,076* | | | | |
| **Kyo-1** | MeSA | 0,001 | 5,30E-05 | **Kyo-1** | MeSA | 0,046 | 0,003 |
| **Kyo-1** | α-farnesene | 46,460 | 0,012 | **Kyo-1** | *(Z)*-nerolidol | 0,420 | 0,005 |
| **Kyo-1** | α-himachalene | 155,770 | 0,019 | **Kyo-1** | α-farnesene | 37,732 | 0,009 |
| **Kyo-1** | limonene | 39,446 | 0,020 | **Kyo-1** | (*E,E*)-2,4-hexadienal | 0,902 | 0,019 |
| **Kyo-1** | hexanoic acid | 76,421 | 0,041 | **Kyo-1** | α-himachalene | 116,646 | 0,031 |
| **Kyo-1** | trans pinane | 422,776 | 0,048 | **Kyo-1** | trans pinane | *1.675,678* | *0,055* |
| **Kyo-1** | terpinolene | *0,120* | *0,064* | **Kyo-1** | *(E)*-ß-ocimene | *4,216* | *0,057* |
| | | | | **Kyo-1** | ß-myrcene | *8,423* | *0,061* |
| | | | | **Kyo-1** | terpinolene | *0,033* | *0,076* |
| **L*er*** | hexanoic acid | 16,710 | 1,38E-04 | **L*er*** | MeSA | 5,625 | 0,001 |
| **L*er*** | *(E)*-ß-ocimene | 0,800 | 0,001 | **L*er*** | *(E)*-ß-ocimene | 0,037 | 0,005 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **L*er*** | MeSA | 8,118 | 0,001 | **L*er*** | ß-sesquiphellandrene | 3,207 | 0,014 |
| **L*er*** | ß-sesquiphellandrene | 4,187 | 0,008 | **L*er*** | ethylsalicylate | 183,936 | 0,042 |
| **L*er*** | DMNT | 9,416 | 0,015 | **L*er*** | *(Z)*-ß-ocimene | 24,405 | 0,050 |
| **L*er*** | ß-farnesene | 1,505 | 0,024 | **L*er*** | decanal | *1.021,292* | *0,052* |
| **L*er*** | *(E)*-2-hexenal | 0,003 | 0,026 | **L*er*** | pulegone | *178,818* | *0,053* |
| **L*er*** | α-copaene | 0,011 | 0,029 | **L*er*** | 3-carene | *974,396* | *0,076* |
| **L*er*** | *(Z)*-ß-ocimene | 27,146 | 0,032 | **L*er*** | geraniol | *352,990* | *0,077* |
| **L*er*** | acetophenone | 178,215 | 0,047 | **L*er*** | *(Z)*-3-hexenal | *0,959* | *0,079* |
| **L*er*** | *(E)*-3-hexanal | *25,167* | *0,057* | **L*er*** | allo ocimene | *149,587* | *0,084* |
| **L*er*** | pulegone | *84,486* | *0,067* | **L*er*** | TMTT | *6,776* | *0,089* |
| **L*er*** | allo ocimene | *673,440* | *0,074* | **L*er*** | ß-farnesene | *3,541* | *0,090* |
| **L*er*** | 3-carene | *974,396* | *0,076* | | | | |
| **L*er*** | *(E)*-hexenyl acetate | *22,177* | *0,090* | | | | |
| **WS** | MeSA | 0,443 | 2,13E-07 | **WS** | MeSA | 0,541 | 5,86E-07 |
| **WS** | *(Z)*-ß-ocimene | 2,285 | 1,39E-05 | **WS** | *(Z)*-ß-ocimene | 0,033 | 5,42E-05 |
| **WS** | TMTT | 2,205 | 3,09E-05 | **WS** | nonanal | 0,254 | 0,009 |
| **WS** | nonanal | 0,520 | 0,002 | **WS** | DMNT | 0,011 | 0,009 |
| **WS** | *(E)*-hexenyl acetate | 3,563 | 0,003 | **WS** | linalool | 1,124 | 0,014 |
| **WS** | ß-farnesene | 0,148 | 0,015 | **WS** | *(E)*-hexenyl acetate | 6,100 | 0,019 |
| **WS** | 2-pentanal | 35,049 | 0,018 | **WS** | ß-farnesene | 0,307 | 0,025 |
| **WS** | *(E)*-ß-ocimene | 4,715 | 0,029 | **WS** | geranyl acteone | 293,039 | 0,038 |
| **WS** | ß-myrcene | *33,865* | *0,056* | **WS** | *(E)*-ß-ocimene | 5,071 | 0,045 |
| **WS** | (Z)-3-hexen-1-ol | *4,346* | *0,079* | **WS** | ß-myrcene | 30,728 | 0,050 |
| **WS** | cuparene | *1,679* | *0,097* | **WS** | ß-sesquiphellandrene | *4,477* | *0,054* |
| | | | | **WS** | α-farnesene | *408,025* | *0,060* |
| | | | | **WS** | pulegone | *4.725,005* | *0,061* |
| | | | | **WS** | hexan-2-ol | *0,491* | *0,063* |
| | | | | **WS** | hexanal | *4,296* | *0,063* |
| | | | | **WS** | *(E)*-2-hexanal | *2.309,289* | *0,065* |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | | **WS** | TMTT | *41,050* | *0,076* |
| | | | | **WS** | ethylsalicylate | *4.771,445* | *0,083* |

**Table S7.** Total number of compounds that are significantly different between accessions. In bold are the number of compounds depicted that are significantly different after herbivory between two accessions, these numbers are given in italics for the JA-treated plants.

| | An-1 | C-24 | Col-0 | Cvi | Eri-1 | Kond | Kyo-1 | Ler | WS |
|---|---|---|---|---|---|---|---|---|---|
| An-1 | | **3** | **5** | **5** | **4** | **3** | **1** | **2** | **1** |
| C-24 | *0* | | **2** | **5** | **1** | **6** | **3** | **3** | **4** |
| Col-0 | *1* | *3* | | **4** | **2** | **5** | **2** | **1** | **4** |
| Cvi | *4* | *0* | *3* | | **2** | **2** | **3** | **1** | **4** |
| Eri-1 | *1* | *1* | *2* | *1* | | **0** | **0** | **0** | **0** |
| Kond | *2* | *2* | *4* | *4* | *3* | | **0** | **1** | **2** |
| Kyo-1 | *2* | *2* | *0* | *4* | *1* | *2* | | **1** | **0** |
| L*er* | *2* | *0* | *0* | *3* | *3* | *3* | *1* | | **0** |
| WS | *0* | *1* | *3* | *1* | *5* | *1* | *2* | *0* | |