Supplementary Material

# Supplementary Figures and Tables

## Supplementary Figures



 **Supplementary Figure 1** Maximum (max.) and minimum (min.) temperatures during the sampling period







**Supplementary Figure 2** The qRT-PCR validation of differential gene expression levels

## Supplementary tables

**Supplementary Table 1** The genes and primers used for qRT-PCR analysis

|  |  |  |
| --- | --- | --- |
| Gene | Forward primers | Reverse primers  |
| AKR4C9 | GGACACAGCGTGCTACCTAAGA | CACCATCCCAGAGTTCTTCAAT |
| COR2 | AGTAGTCCTCCCCTCCTCCA | GCTTCTCCAACAGATTTTTCCA |
| CYP71D10 | ACAAAACAAAGCACGCAAGGA | CGGACGATGTTTCGCTACCA |
| PAT | CCCCCGCAACGCATACAA | GGTAGAAACAGCCTCCCCAC |
| SAMS2 | ATGGCAGCAGAGACCTTCC | TCAGCATCAAGACCTACATCATC |
| HSP70 | GGCTGGAAAAGGTGAAGGAC | CAGGCACAGTTACGACAGC |
| AC101 | GTTCCGAGAGATTCCGTTGC | ATGCCAAGATAGACCCACCA |

**Supplementary Table 2** The major profile of expression of changed metabolites in different P treatments

|  |  |  |  |
| --- | --- | --- | --- |
| Class | Compounds | CK-vs-P1 | CK-vs-P4 |
| Amino acids and derivatives | L-Serine | 1.11  | 2.49  |
| N-Acetyl-L-phenylalanine | 0.67  | 1.10  |
| Flavonoids | 3,9-Dihydroxypterocarpan | 1.32  | 1.75  |
| Glycitein | 2.01  | 0.58  |
| Kaempferol  | 2.28  | 0.96  |
| Eriodictyol  | 13.21  | 0.24  |
| Afrormosin | 1.48  | 0.60  |
| 4'-Hydroxy-5,7-dimethoxyflavanone | 1.15  | 1.29  |
| Tricetin  | 4.48  | 0.92  |
| 4,4'-dihydroxy-2,6-dimethoxydihydrochalcone | 3.43  | 0.89  |
| 5,7,4'-Trimethoxyflavone | 11.61  | 10.17  |
| 5,7-Dihydroxy-2'-methoxy-3',4'-methyleneoxydihydroisoflavone | 4.61  | 0.88  |
| 3,3',5-Trihydroxy-4',7-dimethoxyflavanone | 7.40  | 1.35  |
| Formononetin-7-O-glucoside (Ononin) | 1.30  | 0.80  |
| Chrysoeriol-7-O-(6''-malonyl)glucoside | 1.46  | 0.41  |
| Apigenin-6,8-di-C-glucoside (Vicenin-2) | 1.83  | 0.69  |
| Lipids | Palmitaldehyde | 1.12  | 1.17  |
| LPE 16:0/18:2 | 0.71  | 1.15  |
| LPC 16:0/18:3/18:2 | 0.80  | 1.25  |
| Nucleotides and derivatives | Ribosyladenosine | 0.55  | 1.09  |
| Organic acids | TranexamicAcid | 1.77  | 1.02  |
| Isocitric Acid | 0.99  | 1.27  |
| Sugar  | Lactobiose | 0.82  | 1.42  |
| Phenolic acids | 4-Nitrophenol | 1.23  | 1.25  |
| 2,5-Dihydroxyacetophenone | 2.17  | 0.64  |
| Coniferyl alcohol\* | 2.47  | 0.99  |
| Syringaldehyde | 2.16  | 0.55  |
| Protocatechuic acid-4-O-glucoside\* | 1.52  | 0.52  |
| 1-O-Glucosyl sinapate | 7.83  | 2.38  |
| Terpenoids | Soyasapogenol E | 0.54  | 0.87  |
| Ursolic acid | 0.54  | 0.87  |
| Soyasaponin | 0.48  | 0.43  |
| Dehydrosoyasaponin | 0.44  | 0.57  |
| Soyasapogenol  | 0.44  | 0.53  |
| Bayogenin | 0.50  | 0.67  |