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Article

Integrated Metabolomics and Transcriptome Analysis of Phenylpropanoid biosynthesis in *Silphium perfoliatum*

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Supplement Materials

Table S1. Primer sequences for the RT-PCR

Gene	Forward primer	Reverse primer
PAL	GGAATATTCGGCAACGGCAC	CCTTAGCGCGTATCGGTCTT
4CL	ACTGGAGTTTACACCAGCCG	CTCCCGTGTTCAGGTACCAC
HCT	CCCTCCGTCCATGATAACCG	AGATCGGGTTGCACCTCAAG
C3H	ATAGGCATAGAAACCGCGCA	TAGTGCGGACCGTAATCTGC
CAD	CGGGAGTGACGGTGTATAGC	CGAGCACCATCGGAGCTTAT
CHS	TCAAGCGCATGTGCGAAAAA	AAAACGCCTGTGTCAATGCC
CHI	TAAGTTCACCGCCATCGGAG	TGAACTCTCGAGTTGCACCC
F3H	GTTGAACCCGTTGAAGGTGC	GTGTTTGAGTTGACCACGGC
FLS	GGGATCCCAAGCGAACTCAT	GGTGGCCACACCCTATGAAA

Table S2. The numbers of unique metabolites' types

Type	Number	Percentage(%)
Terpenoids	689	35.08
Shikimates and Phenylpropanoids	601	30.60
Fatty acids	252	12.83
Alkaloids	191	9.73
Polyketides	106	5.40
Amino acids and Peptides	80	4.07
Carbohydrates	44	2.24

Table S3. The numbers of non-redundant DAMs' types

Type	Number	Percentage
Terpenoids	464	32.77
Shikimates and Phenylpropanoids	458	32.34
Fatty acids	161	11.37
Alkaloids	152	10.73
Polyketides	76	5.37
Amino acids and Peptides	64	4.52
Carbohydrates	32	2.26

Table S4. The numbers of non-redundant DAPs' types

Type	Number	Percentage
Flavonoids	147	32.10
Phenylpropanoids (C6-C3)	65	14.19
Coumarins	58	12.66
Phenolic acids (C6-C1)	44	9.61
Lignans	43	9.39
Isoflavonoids	30	6.55
Phenylethanoids (C6-C2)	16	3.49
Xanthones	8	1.75
Stilbenoids	6	1.31
Diarylheptanoids	5	1.09
Styrylpyrones	2	0.44
Diazotetronic acids and derivatives	1	0.22



Figure S1. Six developmental stages of *S. perfoliatum*.

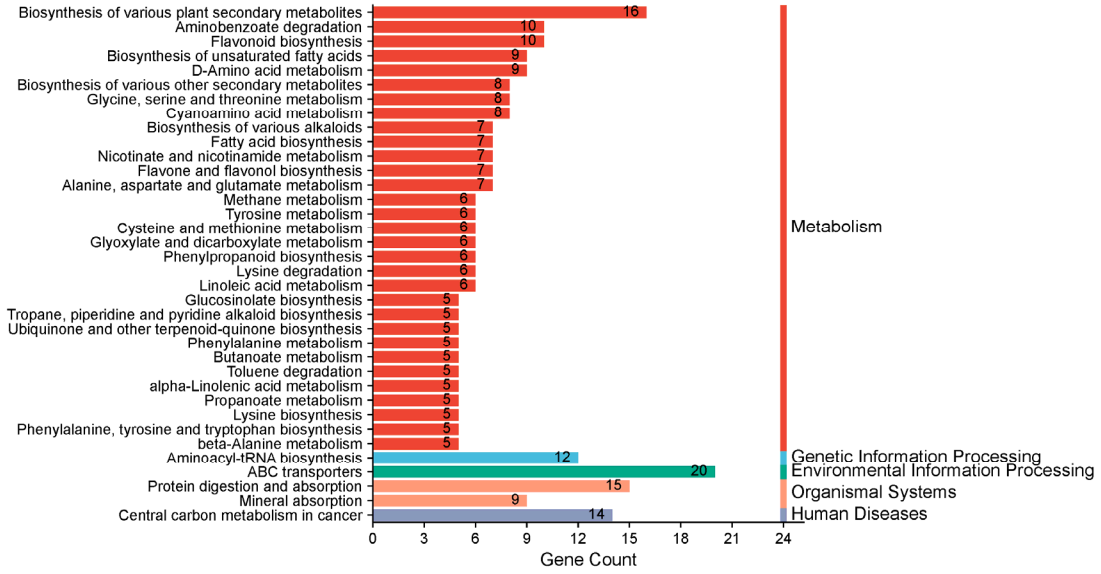


Figure S2. KEGG enrichment analysis of DAMs.

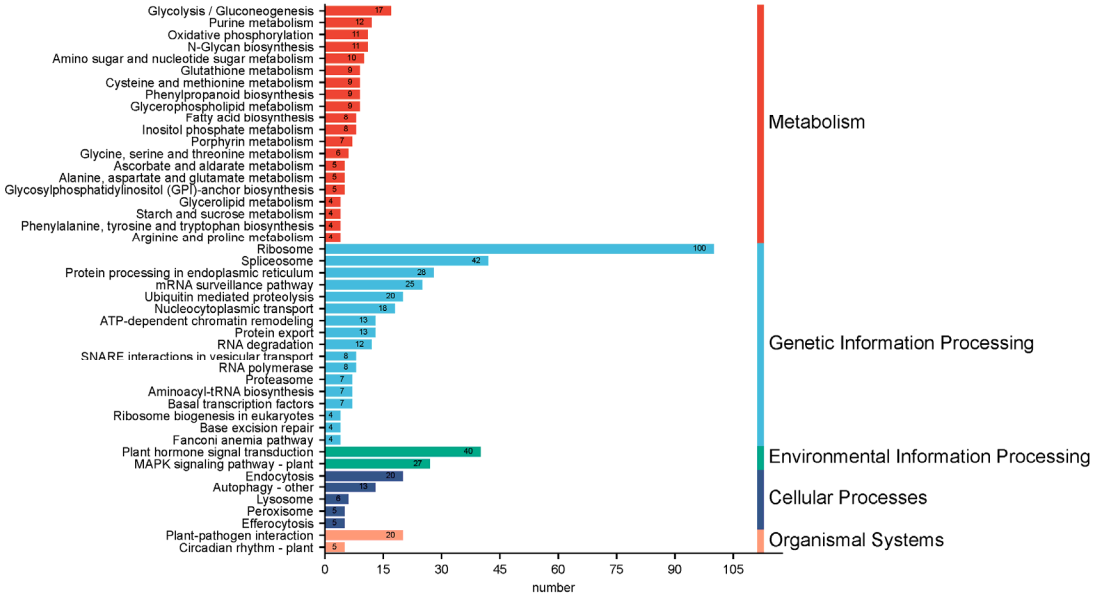


Figure S3. KEGG enrichment analysis of "blue" module.

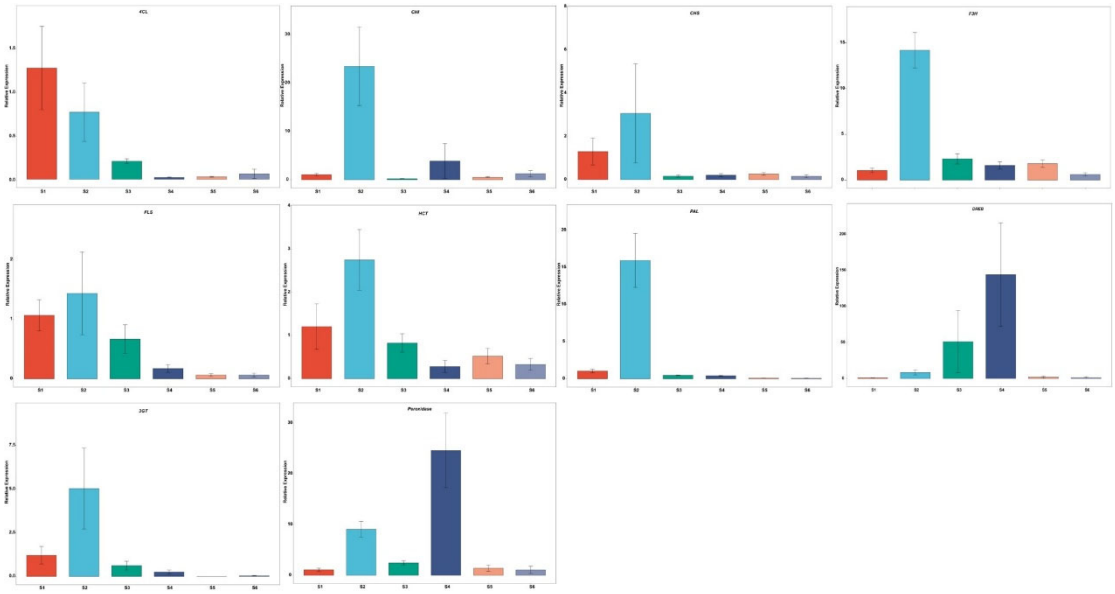


Figure S4. RT-PCR validation. Values are mean ± SD (n = 3).