

## Additional files

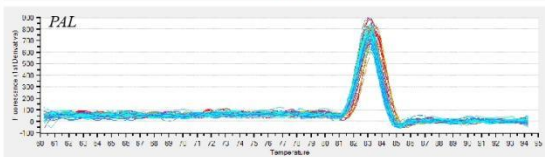
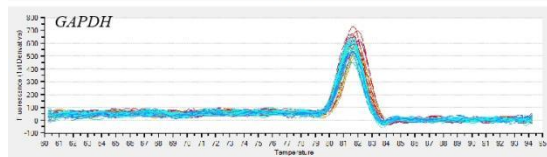
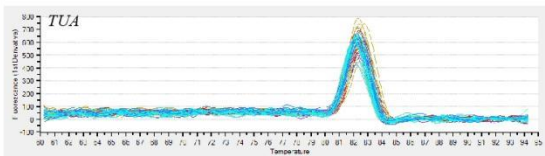
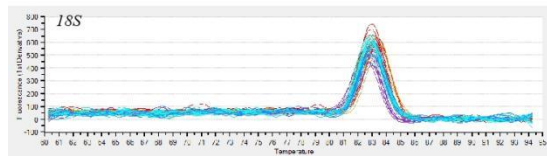
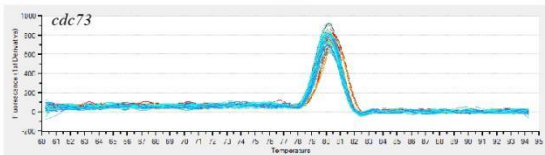
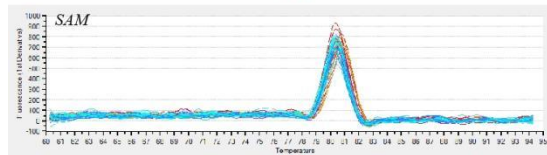
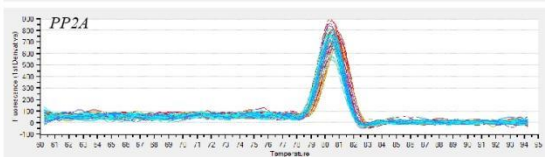
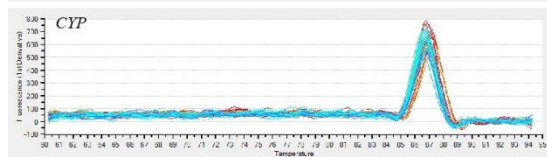
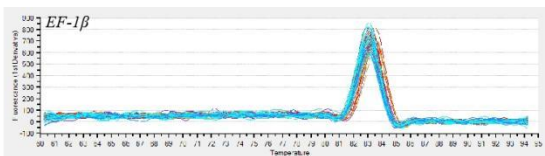
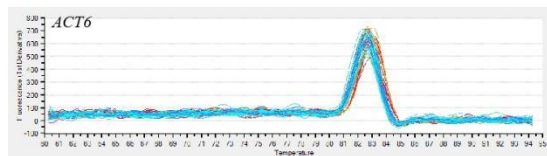
**Supplementary Table S1.** Expression stability values of 10 candidate genes calculated using the RefFinder in *U. rhynchophylla*

Rank	MeJA	ETH	Low temperature	Total
1	<i>PP2A</i>	<i>SAM</i>	<i>SAM</i>	<i>SAM</i>
	1.189	1.495	1.50	1
2	<i>ACT6</i>	<i>cdc73</i>	<i>cdc 73</i>	<i>cdc 73</i>
	2	2.213	2.632	2.213
3	<i>cdc73</i>	<i>ACT6</i>	<i>PP2A</i>	<i>ACT6</i>
	3.464	3	2.931	2.632
4	<i>SAM</i>	<i>CYP</i>	<i>CYP</i>	<i>PP2A</i>
	3.464	4.356	3.13	4.356
5	<i>18S</i>	<i>PP2A</i>	<i>18S</i>	<i>CYP</i>
	5	4.427	4.141	4.356
6	<i>CYP</i>	<i>PAL</i>	<i>PAL</i>	<i>PAL</i>
	6	4.472	4.606	5.958
7	<i>GAPDH</i>	<i>EF-1<math>\beta</math></i>	<i>GAPDH</i>	<i>EF-1<math>\beta</math></i>
	7.483	5.292	6.402	6.435
8	<i>PAL</i>	<i>GAPDH</i>	<i>ACT6</i>	<i>DAPDH</i>
	7.969	7.483	7.737	8.239
9	<i>EF-1<math>\beta</math></i>	<i>TUA</i>	<i>TUA</i>	<i>18S</i>
	8.452	9	9	8.739
10	<i>TUA</i>	<i>18S</i>	<i>EF-1<math>\beta</math></i>	<i>TUA</i>
	10	10	10	10

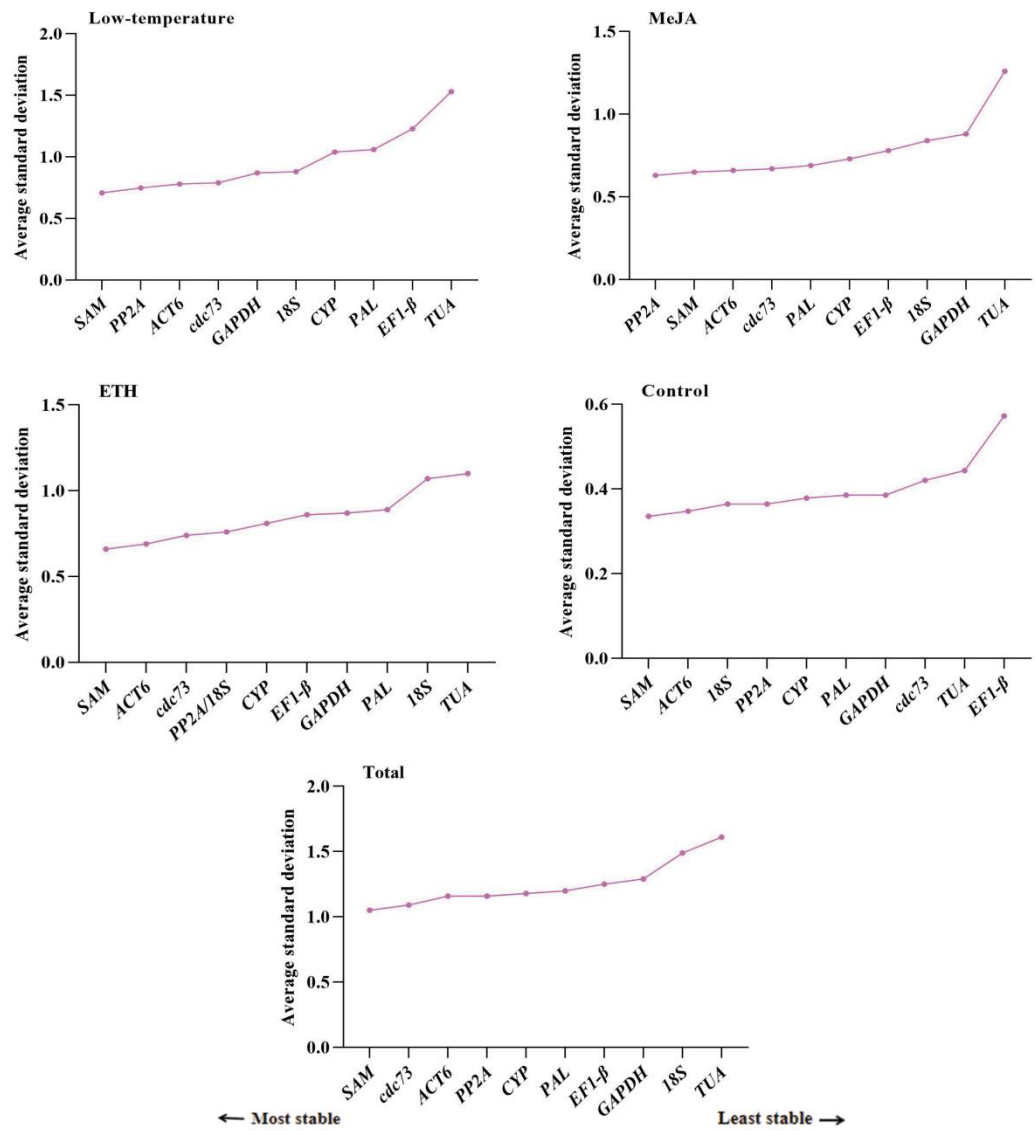
**Supplementary Table S2.** Primer sequences of genes of interest in *U. rhynchophylla*

Gene abbreviation	Gene Name	Primer Sequence 5'-3' (F/R)
<i>WRKY1</i>	WRKY1 transcription factor	GACAGTGACATATCCAAGAGACAGA GCCAGCGATAGCCATCATTTAC
<i>SGD</i>	Strictosidine- $\beta$ -D-glucosidase	GTGCTTATGGGGACTTAATGATTGATC CTCTTGAGAGTAATTGGTTCTGAGC
<i>STR</i>	Strictosidine synthase	CCATCTTCGCTAAGAAATCAAACCAAA GTTGCTGATTTTTCTCACTTTTTGGG
<i>TDC</i>	Tryptophan decarboxylase	CGTTACAACTGAACCCAAACCAG GGTTTCTTGTTGAAGATTCCACCTC
<i>SLS</i>	Secologanin synthase	CTCATAGGTGCATTGATGTGGTTG ACTGGTCCGTACTTGCTTCTC

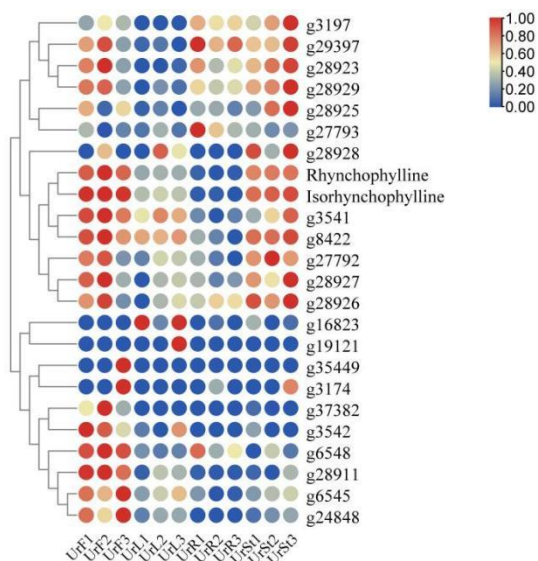
<i>TSA</i>	Tryptophan synthase alpha chain	AGAGAGGCTTTGCACGTAGTCTTC TCAGACAGTTGCCACCGCTTTC
<i>AnPRT</i>	Anthranilate phosphoribosyltransferase	GCTTGTGGAAGTGCTGATGTT GCTGGATGGTAGATTGGAGACA
<i>7-DLH</i>	7-deoxyloganic acid 7-hydroxylase	TGCCGACGAAGAGGAACAA ATGCCCCAAGAAGTTATCACCAGTA
<i>7-DLS</i>	7-deoxyloganetic acid synthase	GCTGGTCTTCTTCTCCTTCTGATAA ACTGGTCCGTACTTGCTTCTC
<i>7-DLGT</i>	7-deoxyloganetic acid glucosyltransferase	CCGCAACAGAGCAGTCAATG CCTCATCACCCACAGAAACCT
<i>PRAI</i>	Phosphoribosylanthranilate isomerase	TTGGTGTGTTTGTAGACGATAATGC GAGTTCAGTAGGCTTCCATCTTCA
<i>G8H</i>	Geraniol 8-hydroxylase	GCTGAGGTGACTGAACTATTAGG GTGTCCGCTGGTCAATTATCT
<i>8-HGO</i>	8-hydroxygeraniol dehydrogenase	CTCTGCTGTTCATCCTCTCCTT CCAATGCCACTTCCACCTAATATC
<i>GES</i>	Geraniol synthase	AGACACAGAAGGATGGCAAGG ACCACCGAGTAATCTCAGACAAC
<i>AS</i>	Anthranilate synthase	CGGAATCAATCGGTTGGAGTCT  AACACTGCCTTCTCGTAGTCTTC



**Supplementary Figure S1.** RT- qPCR melting curves of ten reference genes.



**Supplementary Figure S2.** Average standard stability deviation (SD) of the ten candidate reference gene using Delta Ct algorithm.



**Supplementary Figure S3.** Screening of strictosidine synthase genes (*STR*) heatmap.

Rhynchophylline (RIN) and isorhynchophylline (IRN) are the content.

#### Additional files list

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