

Supplementary Materials



Figure S1. Phenotypes after 14 d of Cu^{2+} stress and melatonin and pCPA treatment. Cu, culture solution that contained 0.1 mM Cu; MT, culture solution with folia application of 0.1 mM MT; Cu+MT, culture solution containing 0.1 mM Cu with folia application of 0.1 mM MT; Cu+pCPA, culture solution containing 0.1 mM Cu with 0.1 mM MT synthesis inhibitor pCPA.

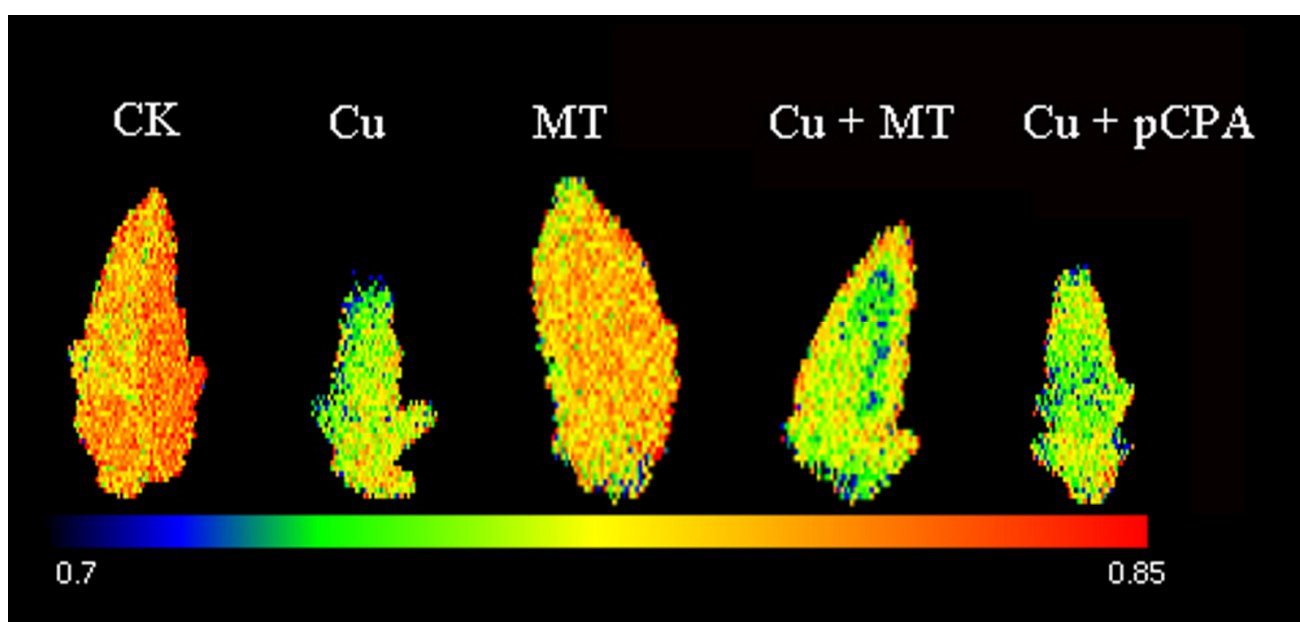


Figure S2. Fv/Fm of leaf under different treatment. Cu, culture solution that contained 0.1 mM Cu; MT, ordinary culture solution with folia application of 0.1 mM MT; Cu+MT, culture solution containing 0.1 mM Cu with folia application of 0.1 mM MT; Cu+pCPA, culture solution containing 0.1 mM Cu with 0.1 mM MT synthesis inhibitor pCPA..

Table S1. The primer sequences used in qRT-PCR and VIGS vector construction. Superoxide dismutase activity, SOD; catalase, CAT; ascorbate peroxidase, APX; glutathione reductase, GR; monodehydro ascorbate reductase, MDHAR; dehydro ascorbate reductase, DHAR; tryptophan decarboxylase, TDC; tryptamine 5-hydroxylase, T5H; serotonin N-acetyltransferase, SNAT; caffeic acid O-methyltransferase, COMT.

Gene full name	Gene Acronym	Gene Accession No.	Forward Primer	Reverse Primer	Comment
Superoxide dismutase	SOD	XM_004232522	ACTACTCCCAGTTGCATC CC	CACCAGGAGCAGCCATGATA	qRT-PCR
Catalase	CAT	NM_001247898	GCAGCTCCCAGTTAATG CTC	AGCAGGACGACAAGGATCAA	qRT-PCR
Ascorbate peroxidase	APX	NM_001247859	GGCACTCTGCTGGTACC TAT	GGAGAGAGTGGGAAACTGCT	qRT-PCR
Glutathione reductase	GR	NM_001247314	GGAGCCATAGAGGTTGA CGA	CTCCTCCCTCCATCAAAGCA	qRT-PCR
Monodehydroascorbate reductase	MDHAR	NM_001247084	CGGACAGTTCCGAACAA ACA	CCCGTGCAATTCGGTTGTAT	qRT-PCR
Dehydroascorbate reductase	DHAR	NM_001247893	GAGGTGAACCCTGAAGG GAA	CCCACAGAGGCAAATTCAGG	qRT-PCR
Tryptophan decarboxylase	TDC	XM_010328040	CAGTGCCGGGATTAACA TGG	GCAAGCCAATCCAGAACGAT	qRT-PCR
Tryptamine 5-hydroxylase	T5H	NM_001247918	CTCCGTCTCCACCATCTC TC	CGGAATTTGGCCGAGTTGAA	qRT-PCR
Serotonin N-acetyltransferase	SNAT	XM_004248987	TAAGGTTGGTTGGCCTC GAA	GGCCATGCCTATCAGCTTCT	qRT-PCR
Caffeic acid O-methyltransferase	COMT	XM_004234980	CCGATCACCACCACCTT ATCC	CCACCAACATCAACAATGGA	qRT-PCR
Actin	Actin	NM_001321306	TGTCCCTATTTACGAGG GTTATGC	AGTTAAATCAGACCAGCAAG AT	qRT-PCR
Caffeic acid O-methyltransferase	COMT1-TRV2	XM_004234980	AAGGTTACCGAATTCTC TAGACTCAAACAGAGGA TGAAGC	GAGACGCGTGAGCTCGGTACA TAAAGCCGCTCTACACGTC	Vector construction