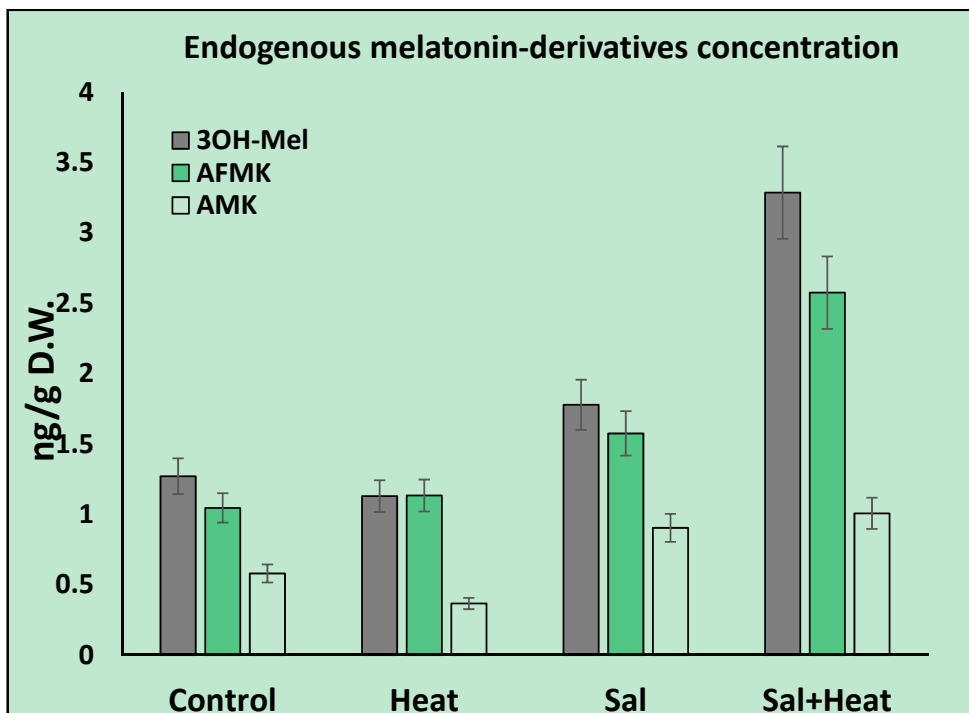
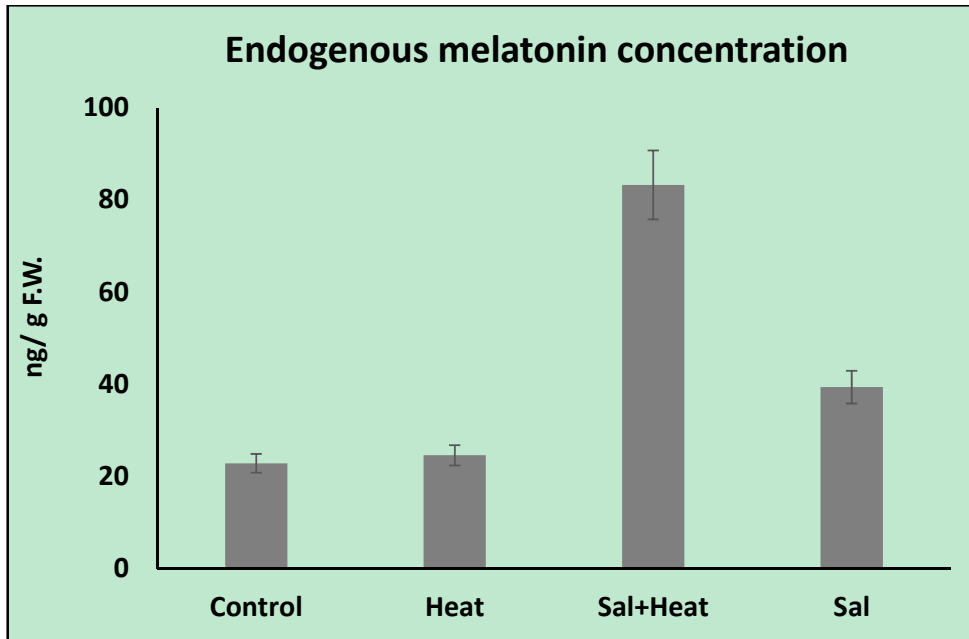


Supplementary Figure 1. Endogenous melatonin and melatonin-derivatives concentration found in tomato leaves under control, salinity, heat or the combination of salinity and heat. These plant material came from a previous experiment carried out in our research group and used in Martinez et al., (2017; Ref #6 in this manuscript)



Supplementary Table S1. Primers used for the quantification of the expression levels of the oxidative metabolism-related transcripts by qPCR.

Gen	Accession (SGN)	Forward	Reverse
<i>SIFe-SOD</i>	Solyc06g048410	taaataagagactttggttcc	tataattgcctcttaacct
<i>SICu/Zn-SOD</i>	Solyc11g066390	ggccaatcttgacccttta	agtccaggagcaagtccagt
<i>SlcAPX</i>	Solyc06g005160	tctgaattgggatttgctga	cgtctaactagctgcaaaa
<i>SIGR1</i>	Solyc09g091840	ttgggtggaactgtgttctt	tctcattcacttccatcca
<i>SICAT1</i>	Solyc12g094620	tgatcgcgagaagatactg	cttccacgttcatggacaac
<i>SIGST</i>	Solyc01g086680	tactcgtttttgggctcgtt	caccgattcaactcctctg
<i>SIMDHAR1</i>	Solyc08g081530	caagggttctcgttctct	ctgcatttctctccaact
<i>SIDHAR1</i>	Solyc05g054760	aggtggctcttggacacttc	cttcagccttggtttctgg
<i>SIPhGPX</i>	Solyc06g073460	tggcttgagcactacaggtg	tttcgtaggcaggaagaag
<i>SIGPX</i>	Solyc08g080940	acggagcaagcacaattgacaac	cgattgattcaccgcaaagctgt
<i>SIEF1a</i>	Solyc11g069700	cgtggttatgttgcctcaa	acagcaatgtgggaagtgtg
<i>SIActin</i>	Solyc03g078400	ggtatcgtctggactctggtg	gggaaggcgtaacctca

Supplementary Table S2. Relative expression values of the oxidative metabolism-related transcripts. Values were normalized against *Sl18S* and *SIEF1a* as internal controls. Then, values were normalized against control samples and \log_2 was calculated and represented. Values are means of $n = 12$

Gene	Control	Control + MEL	S + H	S + H + MEL
<i>SICuZnSOD</i>	0	0.5156233	2.71474	0.8970826
<i>SIFeSOD</i>	0	-0.041923046	1.9429268	1.0795378
<i>SICAT1</i>	0	-0.3673207	-2.30477428	-0.6196356
<i>SlcAPX</i>	0	-0.2766434	-2.1221606	1.97542
<i>SIDHAR1</i>	0	-0.34435534	0.605496057	-0.7845564
<i>SIMDHAR</i>	0	-0.5553976	3.01134936	2.97058697
<i>SIGR1</i>	0	-0.60207986	-2.20976321	2.22078419
<i>SIGPX</i>	0	0.34480157	0.6609694	0.4733273
<i>SIGST</i>	0	0.7191284	-1.98654586	1.9783079
<i>SIPh-GPX</i>	0	-0.73071355	-2.07072258	3.74913186

Supplementary Table 3. Absolute activities of the oxidative metabolism-related enzymes. Values obtained were normalized using soluble protein content of each sample and treatment. Values are the means \pm SE (n=6).

ENZYME	TREATMENT			
	Control	Control + MEL	S + H	S + H + MEL
Cu/ZnSOD	0	0.359	3.278	1.01
FeSOD	0	0.337	2.157	1.578
CAT	0	-0.312	-4.127	-1.112
cAPX	0	-0.471	-4.371	2.912
DHAR	0	-0.236	1.215	-0.839
MDHAR	0	-0.338	0.927	1.002
GR	0	-0.232	-4.231	3.721
GPX	0	-0.202	1.0681	0.992
GST	0	0.365	-2.734	2.007
Ph-GPX	0	0.015	-2.734	2.107

Supplementary Table S4. Log₂ of the oxidative metabolism-related enzymes. Values obtained in Supplementary Table 3 were normalized against control and log₂ was calculated.

ENZYME	TREATMENT			
	Control	Control + MEL	S + H	S + H + MEL
Cu/ZnSOD	26.83 \pm 1.01	34.41 \pm 2.14	260.2 \pm 3.95	54.03 \pm 1.14
FeSOD	8.965 \pm 0.95	11.32 \pm 0.81	39.98 \pm 1.99	26.76 \pm 1.57
CAT	14.55 \pm 1.10	11.72 \pm 0.95	0.832 \pm 0.05	6.731 \pm 0.57
cAPX	15.90 \pm 1.21	11.47 \pm 0.10	0.768 \pm 0.03	119.6 \pm 6.05
DHAR	23.26 \pm 2.03	19.74 \pm 0.14	53.99 \pm 1.12	13.01 \pm 1.02
MDHAR	0.734 \pm 0.20	0.587 \pm 0.01	1.397 \pm 0.08	1.470 \pm 0.07
GR	57.54 \pm 2.36	48.99 \pm 3.45	3.064 \pm 0.12	758.7 \pm 19.58
GPX	21.53 \pm 1.54	18.71 \pm 0.14	45.14 \pm 1.14	42.82 \pm 3.45
GST	22.65 \pm 1.24	29.17 \pm 1.25	3.404 \pm 0.78	91.04 \pm 4.57
Ph-GPX	15.27 \pm 0.96	15.42 \pm 0.98	2.293 \pm 0.54	65.78 \pm 2.14