

**Table S1** Effects of melatonin on the morphology of heat stress exposed wheat seedlings.

Treatments	Shoot fresh weight (g plant <sup>-1</sup> )	Shoot dry weight (g plant <sup>-1</sup> )	Root fresh weight (g plant <sup>-1</sup> )	Root dry weight (g plant <sup>-1</sup> )
CK	0.87±0.025a	0.12±0.03a	0.65±0.016b	0.08±0.01ab
HS	0.61±0.18b	0.08±0.02c	0.55±0.15a	0.06±0.002a
MT	0.89±0.15b	0.15±0.06a	0.75±0.13b	0.09±0.02a
MT+HS	0.64±0.16a	0.14±0.04b	0.70±0.21a	0.08±0.02a

Data represent as a mean of standard deviation (SD) of three replications. Different letters indicate significant differences according to Tukey's HSD test at  $P \leq 0.05$ . Ck-Control; HS: Heat stress (42°C); MT-melatonin (100  $\mu$ M); MT + HS: melatonin (100  $\mu$ M) + heat stress (42 °C)

**Table S2.** Primer sequences used in this study

Gene Name	Sequence
<i>TaMYB80</i>	F-5'GCCCAATCCGTCTCTACTCTA
<i>TaMYB80</i>	R-5'AGGTGGAACCCGTACTTGTAT
<i>TaWRKY26</i>	F-5'ATGTCCTCCTCCACGGGGA
<i>TaWRKY26</i>	R-5'CTAGCAGAGGAGCGACTCGACG
<i>TaWRKY39</i>	F-5'TTTGAGCTCAACAATCGTGATTCGTGAT
<i>TaWRKY39</i>	R5'TTTCCATGGTTTTTCTTCTACCCAAGTTTCAGA
<i>TaSOD</i>	F-5'-TCCTTTGACTGGCCCTAATG-3'
<i>TaSOD</i>	R-5'-CTTCCACCAGCATTTCAGT-3'
<i>TaPOD</i>	F-5'AGCACACAAGGAGAGAGGAG
<i>TaPOD</i>	R-5'AAGAGGCACGCGGTATCG
<i>TaCAT</i>	R: GTGCCTTGCCGATGGTGT
<i>TaCAT</i>	F: TGCCTGTGTTTTTATCCGAGA