

Table S1. The sequences of primers in this experiment.

Target gene	Primer sequence (5'-3')
<i>Hsp10</i>	F: CTCCCTTTATTTGACCGTGTCTTGT R: CTTAGAGCCTTCTCCGACTGCTACTA
<i>Hsp30</i>	F: GAGGACGGAAGGAAGGAGACTGAT R: TTGGACATGGAGCACAGCACATC
<i>Hsp40</i>	F: CGTGAACGCCTCTGTTGAGATGG R: TACCGATGCTTGAGAGCCTCCTAC
<i>Hsp47</i>	F: AGTAGAGAAACTCCTGACCAGAGAACA R: CGTGGCTGACTTCCATGCTGATT
<i>Hsp60</i>	F: GTTGGTCTTCAGGTAGTTGCTGTCAA R: ACCTCTCCCACCTTTCCAAAGTCAT
<i>Hsp70</i>	F: ACCTCGGCACTACCTACTCCTGT R: CACCTGGTTCTTGGCAGCATCTC
<i>Grp78</i>	F: ACTGCTGCTGCCATTGCCTATG R: GCTGGTCAAAGTCTTCGCCTCC
<i>Hsp90</i>	F: GCCTGGAGCTTCTGAAGATGA R: GCGGTTTGAGACGGTTACCTTT
<i>Grp94</i>	F: GGCACAAGCATAACCAGACAGGA R: GACCGTAACGTGGCAGTCTCAA
<i>Hsp110</i>	F: TCCATCCCTTATCCACAGCCTCAG R: CCTCCACCTCTATCTTCTCTACCACAG
<i>SOD1</i>	F: ACTGCTGTGCGTCCGATGATG R: GGCGATAAACAATAATGGCTGCGTAA
<i>SOD2</i>	F: GGTAGACCAAGGACGGACTGTCATAT R: GGAACATCCCAACGCAGGAACAA
<i>SOD3</i>	F: GAGGTGCTGCTGAATCTTGCCATA R: TCAGTCTTCAAGAGCAATTCACATCCA
<i>CAT</i>	F: TGGACGGATCATTGAGGAGGAGAC R: ACAAGAAGAGAACGATCAAGACCTACAC
<i>GPx</i>	F: GACCAATCACAGAGCCTCCTACAGA R: CCGCTTCGAGACCATCAACATCC
<i>Bax</i>	F: TGGAGTCTTCTTAGCTGGCGTTCT R: TTGTCAGTGCTGGAGTGAATTGGAAT
<i>Bcl-2</i>	F: ACGGCAATACTTAGGATGGTCTTGATG R: GTTGGATGGATGACTGACTATCTGAACA
<i>Caspase-3</i>	F: GCGTAATGGAACTGATGTAGATGCCTTA R: GTAGCCTTCCTCACCGTGACTCA
<i>Caspase-8</i>	F: ATCCAATACTCAGCCAGAGAAGCA R: GTCGTTCTTGTTTCATCCTAGCCTGTT
<i>Caspase-9</i>	F: GACTGCTGCCTTATCATCATCCTCTC R: GTGACCGTTGAACAAGTTGACGATTC
<i>β-Actin</i>	F: CCATGACAATAACCAGTGGTACGACC R: ATGATATGGAGAAGATCTGGCATCA

Table S2. Histological lesions in the liver of *Q. spinosa* under the cold (5 °C) and heat (30 °C) stresses for 12 h and 48 h.

Histological lesions	Control	Cold stress		Heat stress	
		12 h	48 h	12 h	48 h
Congestion	0	2	3	1	3
Enlargement of sinusoids	0	0	2	0	1
Inflammatory cell infiltration	0	2	3	0	0
Hemorrhage	0	3	1	3	1
Number of melanomacrophages	1	2	0	3	0
Percentage of melanomacrophages area	6.59 ±	8.63 ±	0.62 ±	26.44 ±	2.85 ±
	0.22	0.18*	0.12***	0.58***	0.16**

Note: Lesions were scored according to their severity (0: none; 1: mild; 2: moderate; and 3: severe). Data (percentage of melanomacrophages area) were shown as mean ± SD (n = 6, * P < 0.05 and ** P < 0.01 as compared with control group).