Supplementary information:

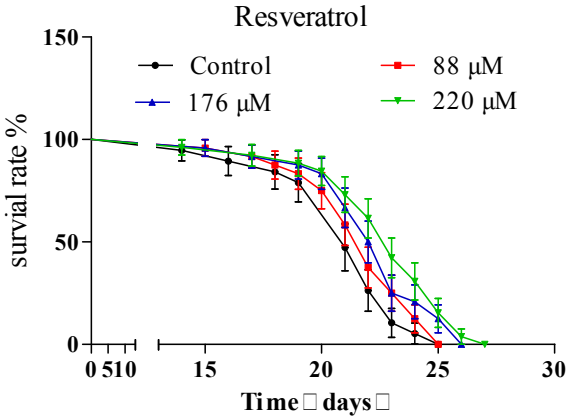
Supp 1 The primer sequences for RT-qPCR (*C. elegans*).

Gene	Gene ID	Direction	Primer sequences (5'-3')
Actin-1	179535	Forward	TCGGTATGGGACAGAAGGAC
		Reverse	CATCCCAGTTGGTGACGATA
Cat-1	180837	Forward	CTCCTCGGATTCTCTATCGGTATG
		Reverse	AAGGCGGCATCGGCAATG
Sod-3	181748	Forward	GGCTAAGGATGGTGGAGAAC
		Reverse	ACAGGTGGCGATCTTCAAG
Nhr-8	177551	Forward	GACTCACCGCATACGAACC
		Reverse	GAGCACAACTGATAACCGACA
Mev-1	260040	Forward	CGATTTCCCGCTCCTTTG
		Reverse	GCTGGTAGACGGTGAGATGTG
Skn-1	177343	Forward	CACGCCGTCAGCGAAGTA
		Reverse	CCTGGCCTCTCTACCTTGTT
Sek-1	181043	Forward	ATGCTCGGTGAGTATTGG
		Reverse	TCATTGATAAACCGAGCC

Supp 2 The primer sequences for RT-qPCR (*C. elegans*)

Gene	Gene ID	Direction	Primer sequences （5'-3'）
Actin	181097	Forward	TCGGTATGGGACAGAAGGAC
		Reverse	CATCCCAGTTGGTGACGATA
Isp-1	177609	Forward	ACACCAGCCGCCGATAAT
		Reverse	CCCACAAAGATAGAACTCCTCC
Sod3	181748	Forward	GGCTAAGGATGGTGGAGAAC
		Reverse	ACAGGTGGCGATCTTCAAG
Clk-1	175729	Forward	GCACATACTGCTGCTTCTCG
		Reverse	TCATTCCATCGTGTTCTACTCC
Dod-17	187266	Forward	ACACGGACACGCATTACCA
		Reverse	TTCCTCCAAACAGCCACC
Ctl-2	175085	Forward	ACACGGACACGCATTACCA
		Reverse	TTCCTCCAAACAGCCACC

Supp 3 Effect of Resveratrol on the lifespan of *C. elegans*. Day 1 young adult's nematodes were treated with a low (88 μM), moderate (176 μM) and high (220 μM) or without (0 μM) dose of standardized blueberry extracts. Survival was monitored starting on day 1 of adulthood. Nematodes that were exposed to the blueberry extracts survived significantly longer than those that did not ($p < 0.05$). The experiment was repeated multiple times and a representative trial is shown.

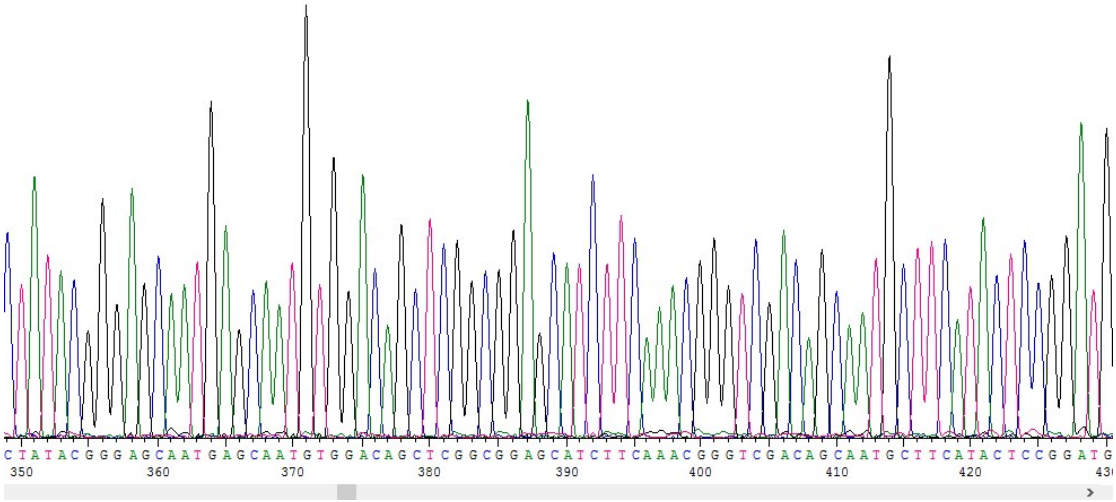


Group	Number	Mean lifespan(days)	% of control	Maximum lifespans
Control	121	21.00 ± 1.00[a]	100.0	25
Res (88 μM)	96	22.50 ± 0.70[ab]	107.1	25
Res (176 μM)	113	22.25 ± 1.06[ab]	110.7	25
Res (220 μM)	104	24.50 ± 2.12[bc]	116.7	26

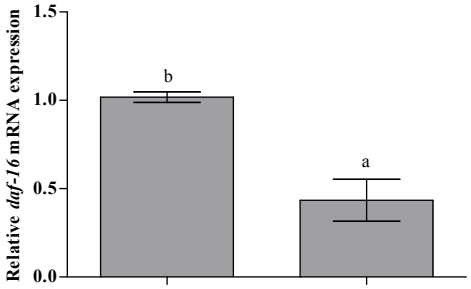
Supp 4：Sequencing base sequence results of HT115-L4440-*daf-16*：

GCATGGACTATATAGGGCGATTGGGTACCGGGCCCCCCCTCGAGGTC
GACGGTATCGATAAGCTTGATATCGAATTCCTGCAGCAAGCGTGGAACTG
TCGTGAGCTCGATTCGCCGCTACCATCTGACATCACACTGCACAATCTCGA
ACCGGCAAGGCCTGATTCCGGAATGAGTTTTTCCACTGATTTTGACGATGA
TTTCTTCAATCTCGACCTCCATCAACAAGAGCGTTCGGCTTCTTTTGGCGG
AGTAACCCAGTATTCTCAACAATTTCTTCGCGAAAAATGCTCGTTCTCTCC
GTATTTCCACACATCTTTAGAGACTGTTGACAGCGGAAGAACTAGCCTAT
ACGGGAGCAATGAGCAATGTGGACAGCTCGGCGGAGCATCTTCAAACGG
GTCGACAGCAATGCTTCATACTCCGGATGGAAGCAATTCTCATCAGACAT
CGTTTCCTTCGGATTTCAGAATGTCCGAATCGCCAGACGATACCGTATCGG
GAAAAAAGACAACGACCAGACGGAACGCTTGGGGAAATATGTCATATGC
TGAACTTATCACTACAGCCATTATGGCTAGTCCAGAGAAACGGTTAACTC
TTGCACAAGTTTACGAATGGATGGTCCAGAATGTTCCATACTTCAGGGAT
AAGGGAGATTCGACTAGTTCTAGAGCGGCCGCCACCGCGGTGGAGCTCGA
ATTCATCGATGATATCAGATCTGCCGGTCTCCCTATAGTGAGTCGTATTAA
TTTCGATAAGCCAGGTTGCTTCCTCGCTCACTGACTCGCTGCGCTCGGTCG
TTCGGCTGCGGCGAGCGGTATCAGCTCACTCAAAGGCGGTAATACGGTTA
TCCACAGAATCAGGGGATAACGCAGAAAGAACATGTGAGCAAAAGGCCA
GCAAAAGCCAGGAACCGTAAAAAGGCCGCGTTGCTGGCGTTTTTCCATAG
GCTCCGCCCCCCTGACGAGCATCACAAAAATCGACGCTCAAGTCAGAGGT
GGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTTCCCCCTGGAAGC
TTC

Supp 5：Sequencing map of HT115-L4440-*daf-16*：



Supp 6 The efficiency of RNA interference (RNAi) in mRNA levels



Supp 7 The efficiency of RNAi interference in protein level