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**Supporting Information:** 



Fig. S1 Confirmation of the RNAi stability for clk-1, isp-1, or daf-2 gene based on qRT-PCRassay.Barsrepresentmeans $\pm$ S.E.M.\*\*P<</td>0.01vsN2.



Fig. S2 Physicochemical properties of QDs. (a) TEM images of CdTe QDs and CdTe@ZnSQDs in K-medium. The concentration for CdTe QDs or CdTe@ZnS QDs was 50 mg L-1.(b) Size distributions of CdTe QDs and CdTe@ZnS QDs. QDs, quantum dots; CdTe@ZnSQDs,CdTeQDswithZnScoating.



Fig. S3 Transgenerational effects of CdTe QDs exposure on survival (a) and growth (b) in wild-type nematodes. P0, parents; F1, the filial generation. QDs, quantum dots. Bars represent means  $\pm$  S.E.M.



**Fig. S4** Effects of CdTe QDs exposure on transcriptional expression of *clk-1*, *isp-1*, and *daf-2* genes in nematodes. QDs, quantum dots. Exposure concentration of CdTe QDs was 20 mg L<sup>-1</sup>. Bars represent means  $\pm$  S.E.M. \*\**P* < 0.01 *vs* control.



Fig. S5 Western blot analysis of the effect of CdTe QDs exposure on expression level of CLK-1 and DAF-2. Actin protein was used as the loading control. QDs, quantum dots. Exposure concentration of CdTe QDs was 20 mg L<sup>-1</sup>. Bars represent means  $\pm$  S.E.M. \*\**P* < 0.01 *vs* control.

Gene	Forward primer	Reverse primer
tba-1	TCAACACTGCCATCGCCGCC	TCCAAGCGAGACCAGGCTTCAG
clk-1	CACATACTGCTGCTTCTCGT	TGAACCAACAGATGAACCTT
isp-1	GCAGAAAGATGAATGGTCC	CAGAAGCGTCGTAGTGAGA
daf-2	ATGTGGCGTGAGAATGAA	AGCCGAACACGAACAACA

**Table S1** Primers used for quantitative real-time polymerase chain reaction (PCR)