Supporting Information

Nano-silver triggers apoptosis through the mitochondria-dependent pathway in the gills of common carp

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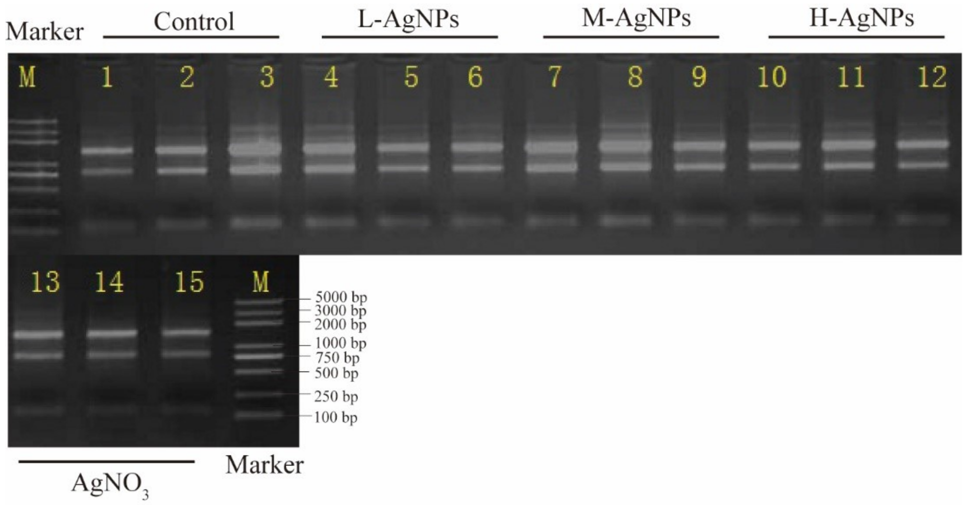

Figure S1. Agarose gel electrophoresis image of gill RNA of common carp after exposure to different treatment. L-AgNPs: Low concentration of nano-silver. M-AgNPs: Moderate concentration of nano-silver. H-AgNPs: High concentration of nano-silver.

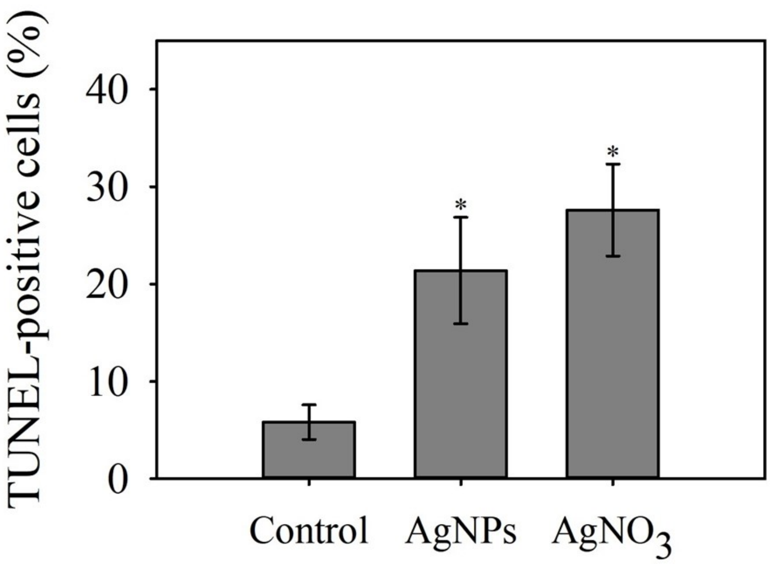

Figure S2. The percentage of TUNEL-positive cells at different treatment.

Table S1. The concentration of total RNA in the gills after exposed to nano-silver and silver nitrate [#].

Treatment	The concentration of total RNA (ng/μL)	The content of total RNA (μg)
Control	1071.63 ± 263.517	32.15 ± 7.91
L-AgNPs	864.03 ± 57.61	25.92 ± 1.73
M-AgNPs	1158.97 ± 454.99	34.77 ± 13.65
H-AgNPs	1265.47 ± 209.78	37.96 ± 6.92
$AgNO_3$	974.33 ± 532.31	29.23 ± 15.97

[#]L-AgNPs: Low concentration of nano-silver. M-AgNPs: Moderate concentration of nano-silver. H-AgNPs: High concentration of nano-silver.

Table S2. Primer used for gene expression analysis through qRT-PCR.

Type	Gene	Primer sequence (5'-3')	Genbank number
	jnk	F: ACACGTTACTACAGAGCCCC	AB001744.1 (Jia et al., 2020)
		R: AACTCCTGGGATGGTGTTCC	
	erk	F: GCTCAACTCCAAGGGCTACA	AB006038.1 (Jia et al., 2020)
		R: GGTTTCTGGGGTAGAGCCTG	
	p38	F: TCAGAACTTGTCTCCCGTCG	D83274.1 (Jia et al., 2020)
		R: GCTTGAGTAGTCGCAATTCCC	
	ap-1	F: GTCCAAATGCCGGAAGAGGA	XM_019126150.1 (Jia et al., 2020)
		R: TGCGTCAACATAAGCTGGCA	
Apoptosis	*fas*	F: GACCTGAACCCTCACCTATCAG	KJ174688.1 (Jia et al., 2020)
		R: TGGGTAGGCTCCATGTAAACC	
	fadd	F: AGCCCTCCTGATGTACCAGA	XM_019064931.1 (Jia et al., 2020)
		R: GTGCTTCTCCTGTATGCCGT	
	caspase-8	F: TTCAAGCCTGCCAAGGAAGT	KC822471.1 (Jia et al., 2020)
		R: CTCTAGTGTGGCGGAAGGAC	
	cytc	F: GGTTTTCGTCCAGAAGTGCG	KJ174687.1 (Jia et al., 2020)
		R: CCGGTCTTGCGTCCAAAAAG	
	caspase-9	F: AGGGAGTCAGGCTTTTCCAG	KC676314.1 (Jia et al., 2020)
		R: AGTGAAGGCTGTATGGGGAC	
	caspase-3	F: ACAGGCATGAACCAACGGAA	KF055462.1 (Jia et al., 2020)
		R: TGTGGTCGTTATGGGCAACT	
	bcl-2	F: ATGTGCGTGGAAAGCGTCAAC	KJ174686 (Chen et al., 2020)
		R: AAAGGCTCCGATGGTCACTCC	
	bax	F: TCCACTCTTCAACCAACTC	KJ174685.1 (Wang et al., 2019)
		R: GCCAATAGTCTGCCATGT	
	p53	F: GGG CAA TCA GCG AGC AAA	AF365873 (Jiao et al., 2019)
		R: ACT GAC CTT CCT GAG TCT CCA	
Internal reference	*β-actin*	F: ATCCGTAAAGACCTGTATGCCA	JQ619774.1 (Tang et al., 2012)
		R: GGGGAGCAATGATCTTGATCTTCA	

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