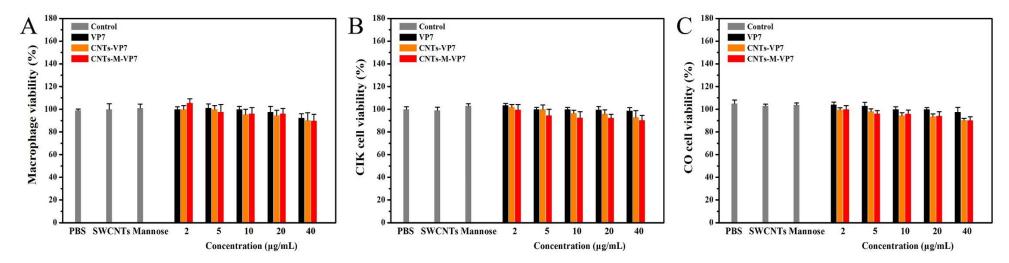*Article*

Targeted Delivery of Mannosylated Nanoparticles Improve Prophylactic Efficacy of Immersion Vaccine against Fish Viral Disease

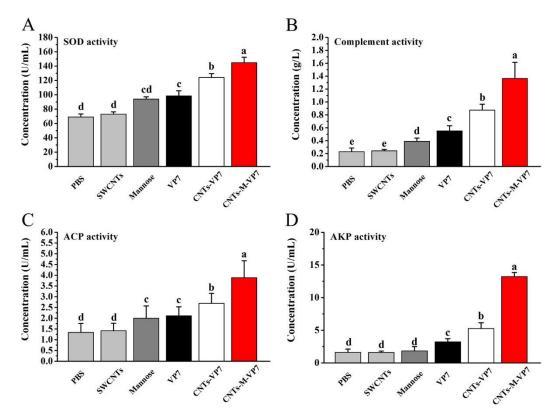**Table S1.** Primers used for the analysis of mRNA expression.

Genes	Accession no.		Primer Sequences (from 5′ to 3′)	Product Size (bp)
18S	EU047719	Forward	ATTTCCGACACGGAGAGG	90
		Reverse	CATGGGTTTAGGATACGCTC	
MHC-I	AY391782	Forward	CCTGGCAGAAAAATGGACAAG	271
		Reverse	CCAACAACACCAATGACAATC	
CD4	KX033448.1	Forward	GTGCAGAGCTGCACTGCGACA	240
		Reverse	GCACTATTTTGCCTCCTTCAGA	
MHC-II	EF140725.1	Forward	GAAGGAGAAATTACTCTA	138
		Reverse	TTTCTCTTGTGGATATTTGTAA	
CD8	GQ355586	Forward	GAGTCTCTGCACGGATCTAT	172
		Reverse	GTGTAGTGTTCCGAATTTAAGT	
IL-1β	EU047716	Forward	GGAGAATGTGATCGAAGAGCGT	448
		Reverse	GCTGATAAACCATCCGGGA	
TNF-α	EU047718	Forward	TGTGCCGCCGCTGTCTGCTTCACGCT	291
		Reverse	GATGAGGAAAGACACCTGGCTGTAGA	

Figure S1. Safety evaluation of nanovaccine *in vitro*. Relative cell viability of (A) grass carp macrophage, CIK cells (B), and CO cells (C)after incubation with different concentrations of VP7, CNTs-VP7, and CNTs-M-VP7 for 24 h. Values are presented as as mean ± SD.

Figure S2. Enzyme activities in vaccinated grass carp: (**A**) Superoxide dismutase (SOD) activity; (**B**) Complement activity; (**C**) Acid phosphatase (ACP) activity; (**D**) Alkaline phosphatase (AKP) activity. Data are means for three assays and represented as mean ± SD. *p* values were calculated by Duncan's test. Data at the same sampling time with different letters are significantly different ($p < 0.05$).