

Enhancing mucosal immune response of Newcastle disease virus DNA vaccine using

N-2-hydroxypropyl trimethyl ammonium chloride chitosan and *N*, *O*-carboxymethyl chitosan

nanoparticles as delivery carrier

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Running title: Quaternized chitosan-based nanodelivery for DNA vaccine

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Supporting Information

Table S1 Protective efficacy of the immunized SPF chickens after being challenged with 100 µl of strain F48E9 at a viral titer of $10^{4.5}$ EID₅₀/0.1 ml. At two weeks post first immunization, booster immunization was performed with the same dosages and routes as the first immunization. When the levels of NDV-specific antibody in serum of every immune group increased to 6.0 log₂ post first immunization, seven chickens were selected randomly from each of the five groups and were infected i.m. for challenge studies.

Groups	Mortality/Total	Morbidity (%)	Protective efficacy (%)
PBS i.m.	7/7	100	0
Blank N-2-HACC/CMC NPs i.m.	7/7	100	0
pVAX-F (o) DNA-C3d6 i.m.	4/7	57	43
N-2-HACC-CMC/pFDNA-C3d6 NPs i.m.	2/7	29	71
N-2-HACC-CMC/pFDNA-C3d6 NPs i.n.	0/7	0	100