



(a)

Critical Quality Attribute	
Particle size (TEM)	23.8 ± 3.4 nm
Dispersity index	0.763
Zeta potential (in PBS)	2.303 ± 1.54 mV
RNA concentration (before encapsulation)	2 nM
RNA concentration (after encapsulation)	1.92 ± 0.24 nM
Encapsulation efficiency	~96%

(b)

Figure S1. Physicochemical characterization of the nanoliposomes used in this study. (a) transmission electron micrograph (TEM) of nanoliposome population. Particle agglomeration is moderate because liposomes easily disperse when in aqueous suspension. (b) quantitative data collected from TEM, dynamic light scattering (DLS), and fluorescence spectroscopy. Data was collected in triplicate over four different experiments (n=12). For particle size analysis, only individual liposomes were measured.