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Supporting Information

S-Linked Sialyloligosaccharides Bearing Liposomes and Micelles as Influenza Virus Inhibitors

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Table S1. Parameters of liposomes

Figure S1 to Figure S36: 1D and 2D NMR spectrum of compounds 3-4, 7, 9-12, 14-17. Figure S37 & S38: HPLC diagram for compound 3 and 4.

	Mean diameter (nm)	Polydispersity	Zeta potential (mV)
Lipo-control	396 ± 19	0.319 ± 0.011	-20.5 ± 2.9
Lipo-3	196 ± 16	0.173 ± 0.013	-22.3 ± 6.8
Lipo-4	356 ± 34	0.317 ± 0.012	-38.3 ± 6.6

 Table S1. Parameters of liposomes.



Figure S2. ¹³C-NMR spectra of 7 (CDCl₃, 100 MHz), BBD





Figure S6. ¹³C-NMR spectra of 10 (CDCl₃, 100 MHz), BBD



Figure S8. 13C-NMR spectra of 11 (CDCl₃, 100 MHz), BBD



Figure S10. 13C-NMR spectra of 12 (CDCl₃, 150 MHz), BBD



Figure S11. COSY-NMR spectra of 12 (CDCl₃, 600 MHz)



Figure S12. HSQC-NMR spectra of 12(CDCl₃, 600 MHz)













Figure S18. ¹³C-NMR spectra of 15 (CDCl₃, 150 MHz), BBD

















Figure S28. HSQC-NMR spectra of $17 (D_2O, 600 \text{ MHz})$



Figure S30. ¹³C-NMR spectra of 3 (pyridine-D₅, 150 MHz), BBD



Figure S31. COSY-NMR spectra of 3(pyridine-D₅, 600 MHz)













Figure S37. HPLC diagram of compound **3** by using Hitachi system with L-2130 pump, L-2200 autosampler and L-2200 detector. Column: syncronis C18 column (4.6mm×250, 5µm; Thermo). Elution: isocratic 55% MeCN in water at flow rate of 1.0 mL/min; the absorbance was measured at 214 nm; $t_R = 9.94$ min, purity: 100%.



Figure S38. HPLC diagram of compound **4** by using Hitachi system with L-2130 pump, L-2200 autosampler and L-2200 detector. Column: syncronis C18 column (4.6mm×250, 5µm; Thermo). Elution: isocratic 55% MeCN in water at flow rate of 1.0 mL/min; the absorbance was measured at 214 nm; $t_R = 7.18$ min, purity: 100%.