Disulfide cross-linked polymeric redox-responsive nanocarrier based on heparin, chitosan and lipoic acid improved drug accumulation, increased cytotoxicity and selectivity against leukemia cells by tumor targeting via “Aikido” principle

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**Figure S1.** FTIR spectra ofChit5, LA, its conjugate Chit5-LA. PBS (0.01 M, pH 7.4). T = 22 °C.



**Figure S2.** Zoomed FTIR spectra ofChit5-LA and DoxMC2 (Dox-SS-LA-Chit5) in the wavenumber region 2650-2450 cm–1. PBS (0.01 M, pH 7.4). T = 22 °C.



**Figure S3.** FTIR spectra of normal HEK293T cells during incubation for 30 min with free Dox (0.1 mg/mL) and micellar Dox formulation (DoxM1). PBS (0.01 M, pH = 7.4). T = 22 or 37 °C.



**Figure S4.** 1H NMR of Chit5 grafted with (a) lipoic acid and (b) oleic acid. PBS (0.01M, pH = 7.4). T = 22 °C.



**(a)**



**(b)**