Supplementary Materials

A Combinatorial Library of Triazine-cored Polymeric Vectors for pDNA delivery *in vitro* and *in vivo*

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1. Characterization of Trazine-core Amphiphilic Polymers (TAPs)

The composition of the final products was characterized by the $^1$H-NMR spectra using integral values obtained for the –CH$_2$CH$_2$O- or CH$_3$- protons of Jeffamine and -CH$_2$CH$_2$NH- protons of PEI. Such as the A$_4$B$_2$ series polymers’ NMR were given in Figure S1, and the integral data of specific protons were agreement well with the polymer’s composition as the expected. The molecular weight (Mw) of the polymers was measured by MADAL-TOF Mass (such as the 1A$_4$1B$_3$ was given in Figure S2).

**Figure S1.** $^1$H NMR of A$_4$B$_2$ series TAPs in D$_2$O with 500 MHz JEOL.

**Figure S2.** TOF-Mass spectrum of 1A$_4$1B$_3$
2. pDNA delivery in HSkM cell line transfected with polymer/pDNA complexes at weight ratios of 5 & 10 after 48 hrs incubation (pDNA 1 µg in 500 uL 10% FBS-medium).

Figure S3. pDNA delivery in HSkM cell line transfected with polymer/pDNA complexes at weight ratios of 5 & 10 after 48 hrs incubation. [TAPs (5/10 µg), PEI 25k, LF-2k (5 µg); pDNA 1 µg in 500 µL 10% FBS medium]. Column A: GFP expression examined under fluorescent microscopy. Original magnification, x200. B) Transfection efficiency analyzed with FACS (Data represent mean ± SD, n = 3, two-tailed Student t-test, * p < 0.05 compared with PEI 25k). C) Cell viability ((Data represent mean ± SD, n = 3, two-tailed Student t-test, * p < 0.05 compared with untreated cell).