Electronic Supplementary Material (ESI) for Journal of Materials Chemistry B. This journal is © The Royal Society of Chemistry 2018

## **Electronic Supplementary Information**

### of

# Self-assembled RNAi nanoflowers via rolling circle transcription for

## aptamer-targeted siRNA delivery

Hui Cheng,<sup>a,b,#</sup> Shanni Hong,<sup>a,#</sup> Zhili Wang,<sup>a</sup> Na Sun,<sup>a</sup> Tengfei Wang,<sup>a</sup> Ye Zhang,<sup>a</sup> Hongxia Chen<sup>b</sup> and

Renjun Pei<sup>a\*</sup>

<sup>a</sup>CAS Key Laboratory of Nano-Bio Interface, Suzhou Institute of Nano-Tech and Nano-Bionics,

Chinese Academy of Sciences, Suzhou 215123, China. E-mail: rjpei2011@sinano.ac.cn.

<sup>b</sup>College of Life Sciences, Shanghai University, Shanghai 200444, China.

# These authors contribute equally.

Strand	Sequence	
Linear	5'-	Phosphate-
ssDNA	ATAGTGAGTCGTATTAACGTACCAACAAGTA	
template	CATCCATTATAAGCTGTCACTTGGACAGCTTATAATGGATGT	
	ACTTTATCTTAGAGGCATATCCC	<b>T</b> -3′
T7 promoter primer	5'- <b>TAATACGACTCACTAT</b> AGGG/	AT-3'
DNA-Chol	5'- <b>ATAGTGAGTCGTATTA</b> ACGTA	ACCAACAA-3'-cholesterol
AS1411-DNA	5'-	
	<u>TTTATCTTAGAGGCAT<b>ATCCCT</b></u> AAAAAAAAAGGTGGTGGTG	
	GTTGTGGTGGTGGTGG-3'	
anti-Bcl-2 siRNA duplex	5'-GUACAUCCAUUAUAAGCUG	<b>TU</b> -3'
	3'-CAUGUAGGUAAUAUUCGAC	AG-5'
Bcl-2 forward primer	5'- CGACTTTGCAGAGATGTCCA	-3'
Bcl-2 reverse primer	5'-ATGCCGGTTCAGGTACTCAG-	3'
β-actin forward primer	5'-TGGCACCACACCTTCTACAAT	G-3'
$\beta$ -actin reverse primer	5'-TCTCAAACATGATCTGGGTCA	TCT-3'

### Table S1. Oligonucleotide sequences



Figure S1. SEM images demonstrating the thermal stability of RNAi-MS, RNAi-MS/DNA-Chol and RNAi-MS/DNA-Chol/AS1411 after being stored at three temperatures (-20°C, 4°C and 25°C) for 30 days.



Figure S2. The specificity of AS1411 containing RNAi-NS towards different cell lines. AS1411 containing RNAi-NS were incubated with 293T cells (A) and MCF-7 cells (B) respectively. After 3 h, the fluorescence images were obtained by a fluorescence microscope with a CCD camera. Green and blue signals represent the fluorescence FAM-labelled RNAi particles and Hoechst dyes.