Electronic Supplementary Material (ESI) for Journal of Materials Chemistry B. This journal is © The Royal Society of Chemistry 2017

Supplementary Information

Glyco-decorated tobacco mosaic virus as a vector for cisplatin

delivery

Xiangxiang Liu,^{a,b} Bowei Liu,^a Sijia Gao,^{a,b} Zhaocheng Wang,^{a,b} Ye Tian,*^a Man Wu,^a Shidong

Jiang^a and Zhongwei Niu*^a

^aKey Laboratory of Photochemical Conversion and Optoelectronic Materials, Technical

Institute of Physics and Chemistry, Chinese Academy of Sciences, Beijing 100190, China.

^bUniversity of Chinese Academy of Sciences, Beijing 100049, China

* Corresponding authors. E-mail: <u>niu@mail.ipc.ac.cn</u>(Z.N.); <u>tiany@mail.ipc.ac.cn</u>(Y.T.).



Figure S1 Synthetic route of α -D-mannopyranosylazide, and ¹H NMR of α -D-mannopyranosylazide in D₂O.



Figure S2 Synthetic route of β -lactosylazide, and ¹H NMR of β -lactosylazide in D₂O.



Figure S3 TEM images of TMV drug vectors, including (a) CDDP@TMV, (b) CDDP@TMV-Man and (c) CDDP@TMV-Lac. (d) The list of zeta potential of TMV drug vectors recorded at the same TMV concentration (0.1 mg/mL).



Figure S4 Confocal laser scanning microscopy (CLSM) of intracellular distribution of TMV vectors at a determined time. (a-f) Intracellular distribution of Rhodamine B labeled TMV-Man incubated in MCF-7 cells for a determined time. (g-l) Intracellular distribution of Rhodamine B labeled TMV-Lac incubated in HepG2 cells for a determined time. Red color was imaged for TMV-Man and TMV-Lac by Rhodamine B, and green color was imaged for lysosomes marked by LysoTracker.



Figure S5 Cell apoptosis of (a) MCF-7, (b) HepG2 and (c) HeLa control cells, which are not treated with TMV-based drug vectors.