Supporting Information

Cellular Interactions of Doxorubicin-Loaded DNA-Modified Halloysite Nanotubes

Yeonju Lee,[a] Goo-Eun Jung,[b] Sang Joon Cho,[b,c] Kurt E. Geckeler[d,e,f,*] and Harald Fuchs[a,e,g,*]

[a] Physikalisches Institut, Universität Münster, Wilhelm Klemm-Str. 10, 48149 Münster, Germany

[b] Park Systems Corp., KANC 4F, Iui-Dong, 906-10, Suwon 443-270, Republic of Korea

[c] Advanced Institute of Convergence Technology, Seoul National University, Suwon, 443-270, Republic of Korea

[d] School of Materials Science and Engineering, Gwangju Institute of Science and Technology (GIST), 1 Oryong-dong, Buk-gu, Gwangju 500-712, Republic of Korea

[e] Department of Nanobio Materials and Electronics (WCU),Gwangju Institute of Science and Technology (GIST), 1 Oryong-dong, Buk-gu, Gwangju 500-712, Republic of Korea

[f] Department of Medical System Engineering, Gwangju Institute of Science and Technology (GIST), 1 Oryong-dong, Buk-gu, Gwangju 500-712, Republic of Korea

[g] Center for NanoTechnology (CeNTech), Heisenbergstr. 11, 48149 Münster, Germany

* To whom correspondence should be addressed

E-mail: fuchsh@uni-muenster.de, keg@gist.ac.kr

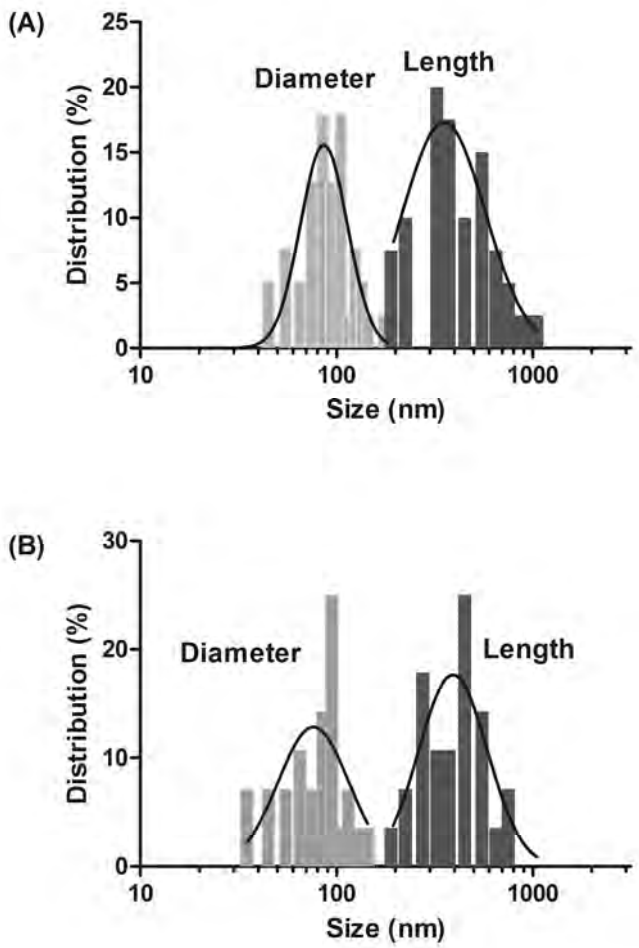

Figure S1. Size (diameter and length) distribution of (A) DNA-wrapped HNTs (HD) and (B) doxorubicin-loaded, DNA-wrapped HNTs (HDD) obtained from TEM images. 50 HD and 30 HDD counted for analysis. The solid line shows Gaussian distribution.

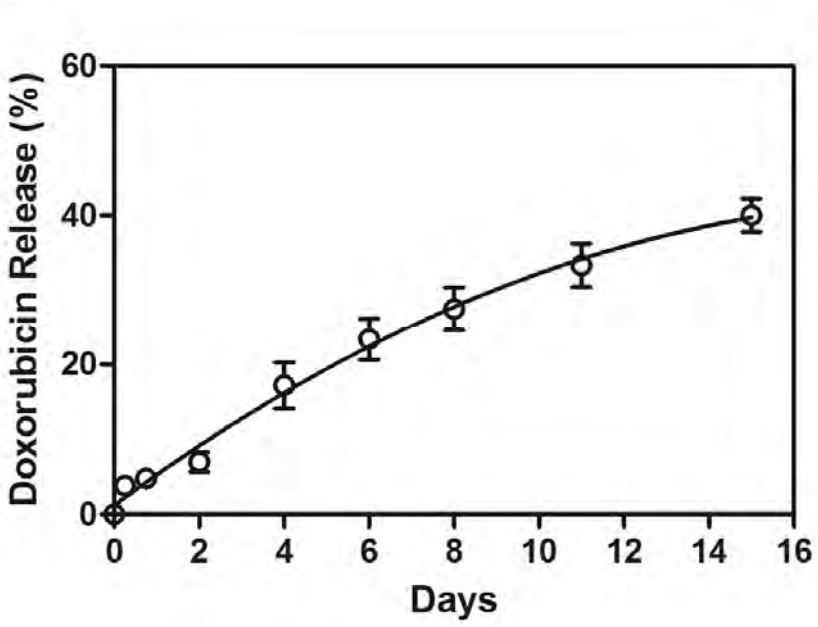

Figure S2. Doxorubicin release profile at pH 7.4.

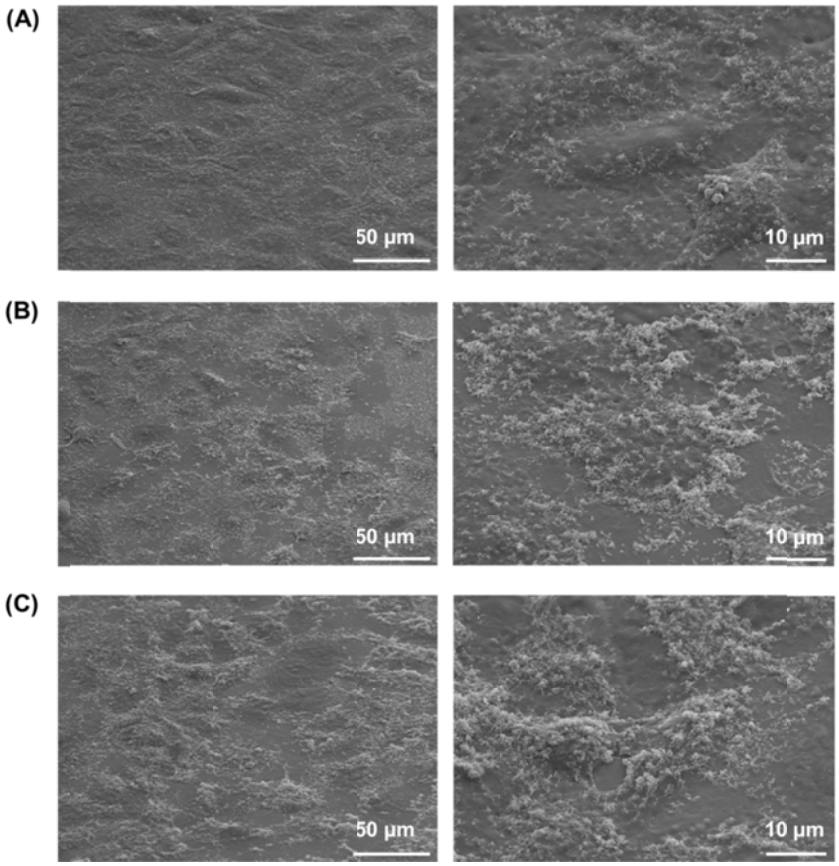

Figure S3. SEM images of A549 cells after treatment of HD (500 µg/ml) for (A) 2 hours, (B) 12 hours, and (C) 24 hours.

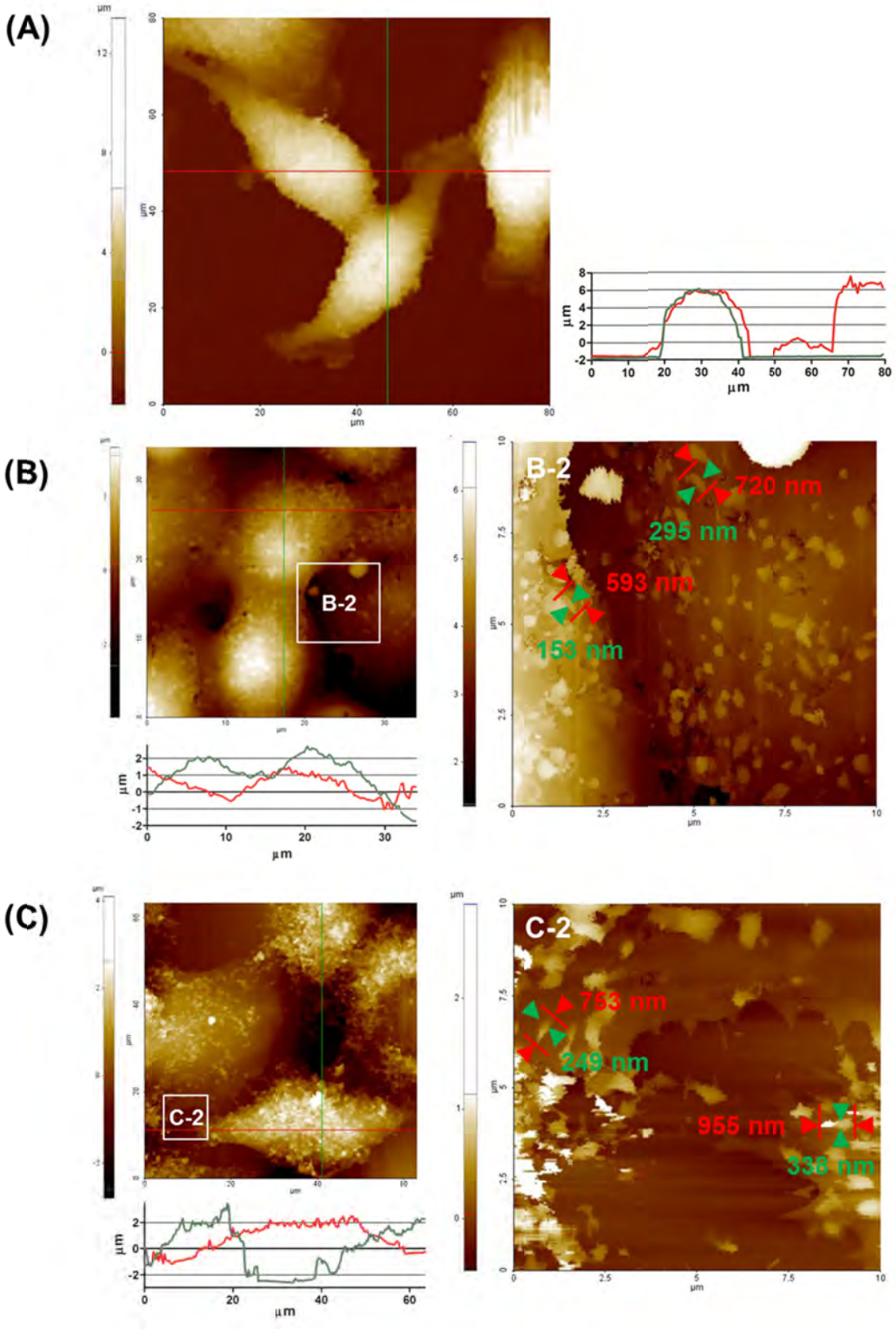

Figure S4. SICM mages (normal mode with z-axis scale) of (A) untreated A549 cells, after exposure to HDD (500 µg/ml) for (B) 2 hours, and (C) 12 hours.