Electronic Supplementary Material (ESI) for Nanoscale.

Supporting Information

Dialysis-derived urchin-like supramolecular assembly of tannic acid and paclitaxel with high porosity

Jiyeon Kim, Chanuk Choi and Seonki Hong*

Department of Emerging Materials Science, DGIST, Daegu, 42988, Republic of Korea

*Correspondence to: seonkihong@dgist.ac.kr

Keywords: self-assembly, dialysis, tannic acid, paclitaxel, API crystal, drug delivery system

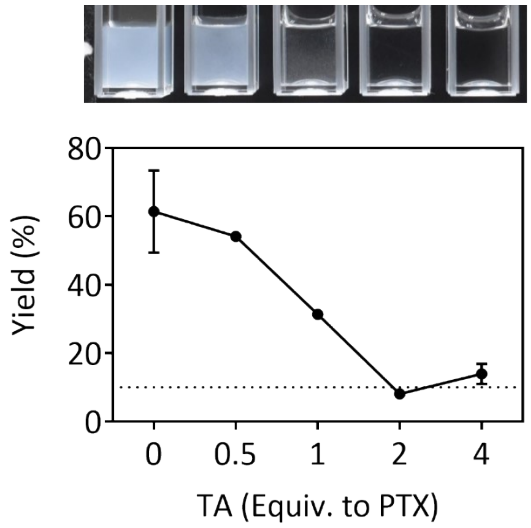

Figure S1. Overall yield of synthesized PTX/TA microstructures depending on the TA concentration (equivalent to PTX) used initially for the synthesis.

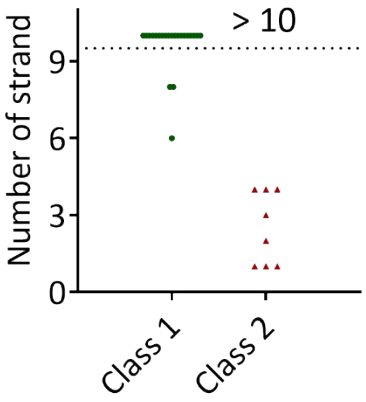

Figure S2. Number of strands of two distinct shapes of synthesized PTX/TA complexes, where class 1 denotes the urchin-like structures and class 2 denotes the straight fibrous structures.

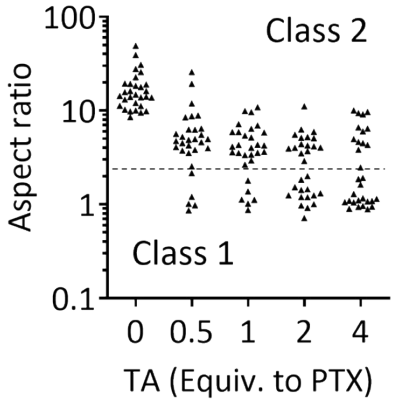

Figure S3. Aspect ratio of the synthesized PTX/TA complex at various concentrations of TA to PTX.

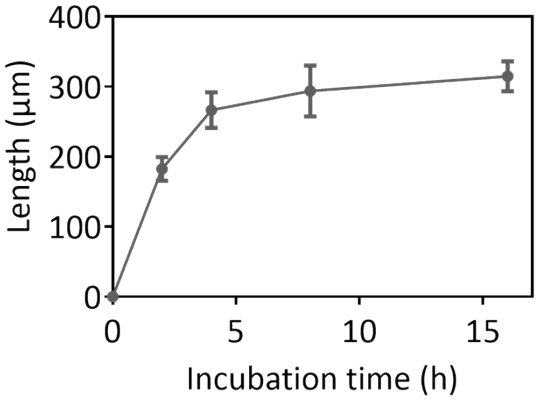

Figure S4. Growth of PTX/TA fibers synthesized under static conditions without dialysis.

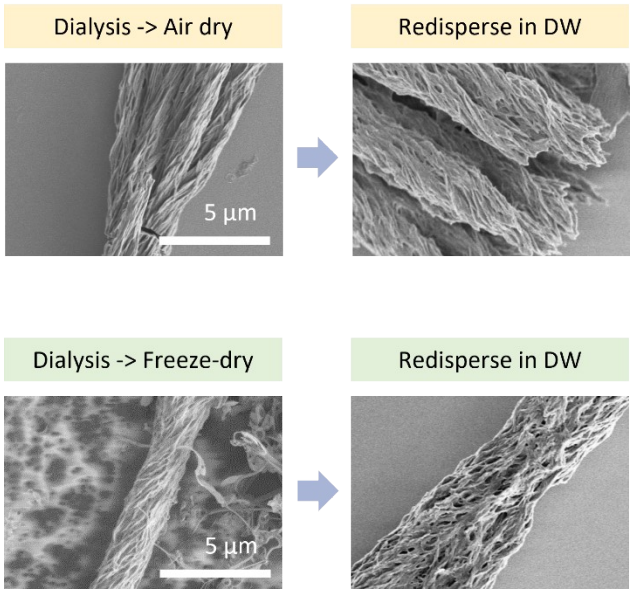

Figure S5. Stability of microstructures with high porosity synthesized by dialysis.

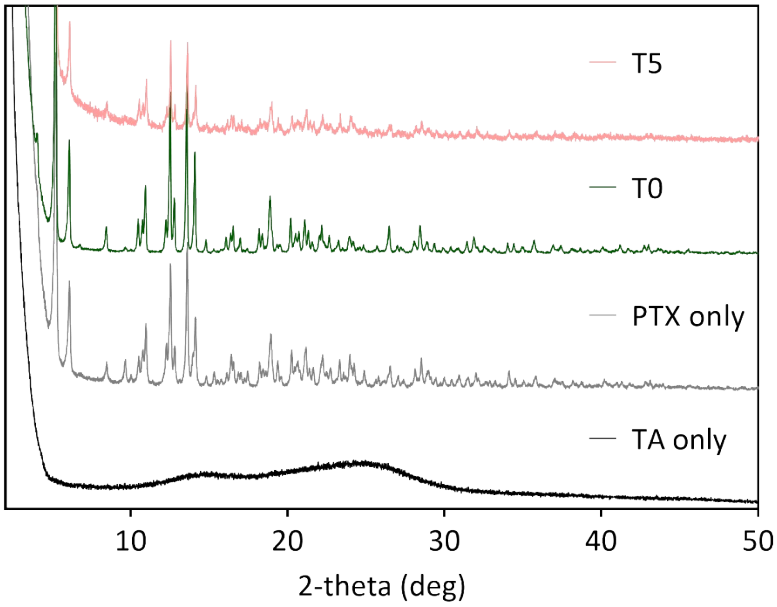

Figure S6. X-ray diffraction (XRD) patterns of the PTX/TA complexes with high porosity (T0), without any porosity (T5), PTX alone, and TA alone.

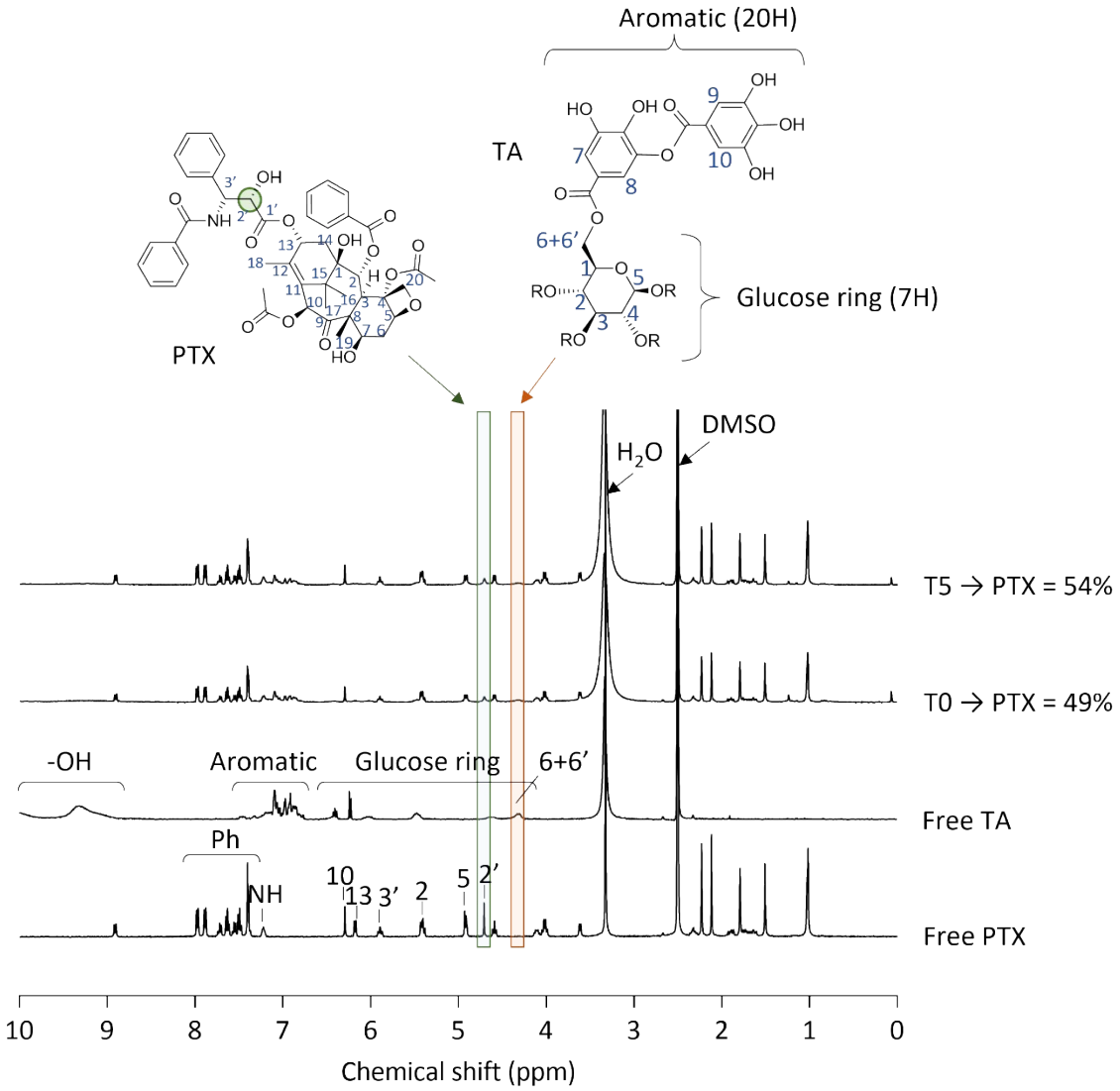

Figure S7. PTX content of the PTX/TA complexes with high porosity (T0) and without any porosity (T5) by ^{1}H-NMR analysis after being completely dissolved in DMSO-d_6.

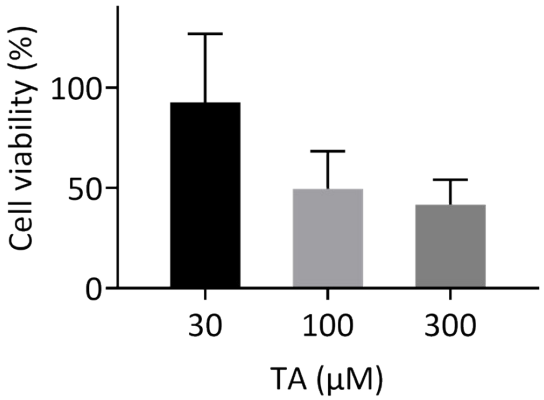

Figure S8. In vitro anticancer activity of tannic acid (TA) on the MCF-7 breast cancer cell line.