Supplementary Information

One-pot synthesis of carbon dots with intrinsic folic acid for synergistic imaging-guided photothermal therapy of prostate cancer cells

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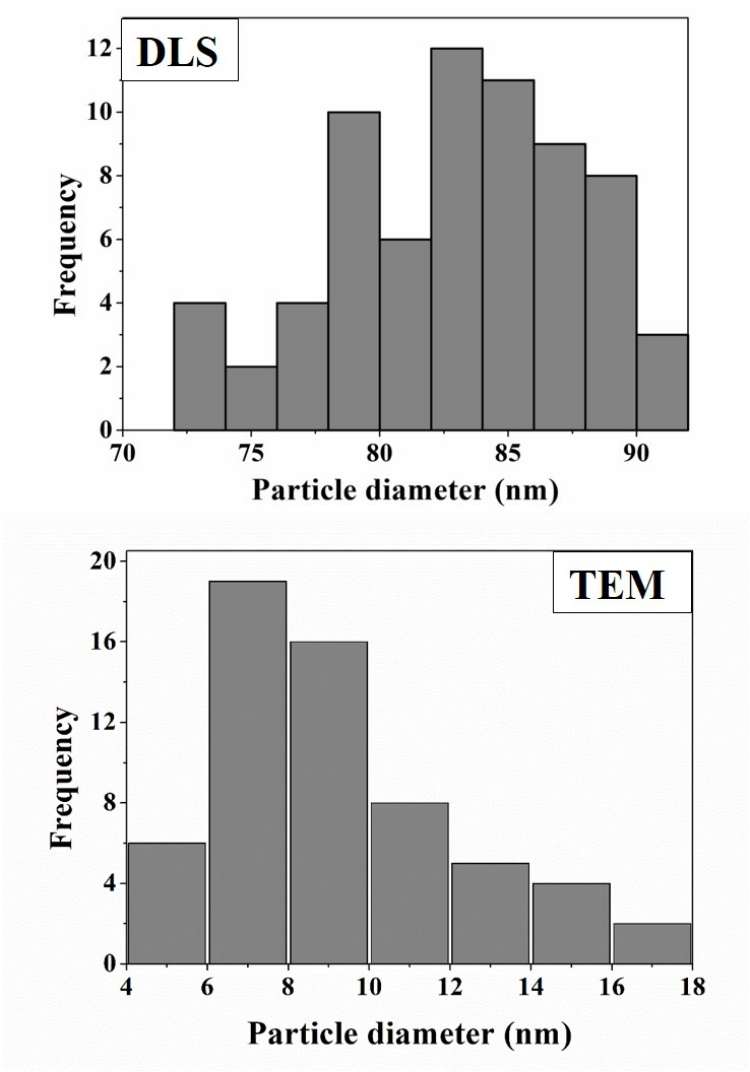

Fig. S1. Particle size distribution of PFCDs from dynamic light scattering (DLS) and TEM image.

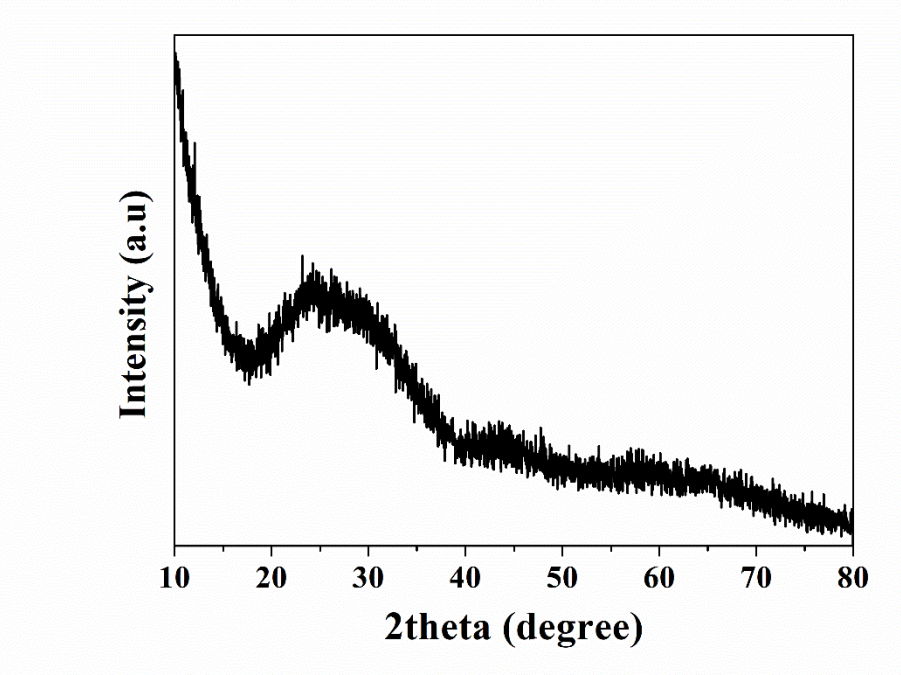

Fig. S2. X-ray diffraction (XRD) pattern of PFCDs.

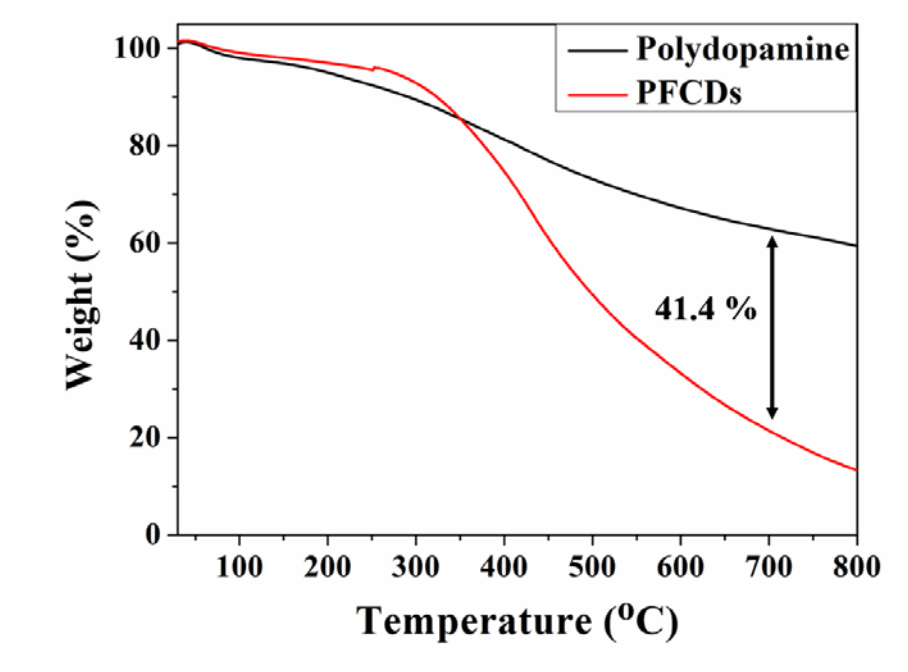

Fig. S3. Thermogravimetric analysis (TGA) of polydopamine and PFCDs.

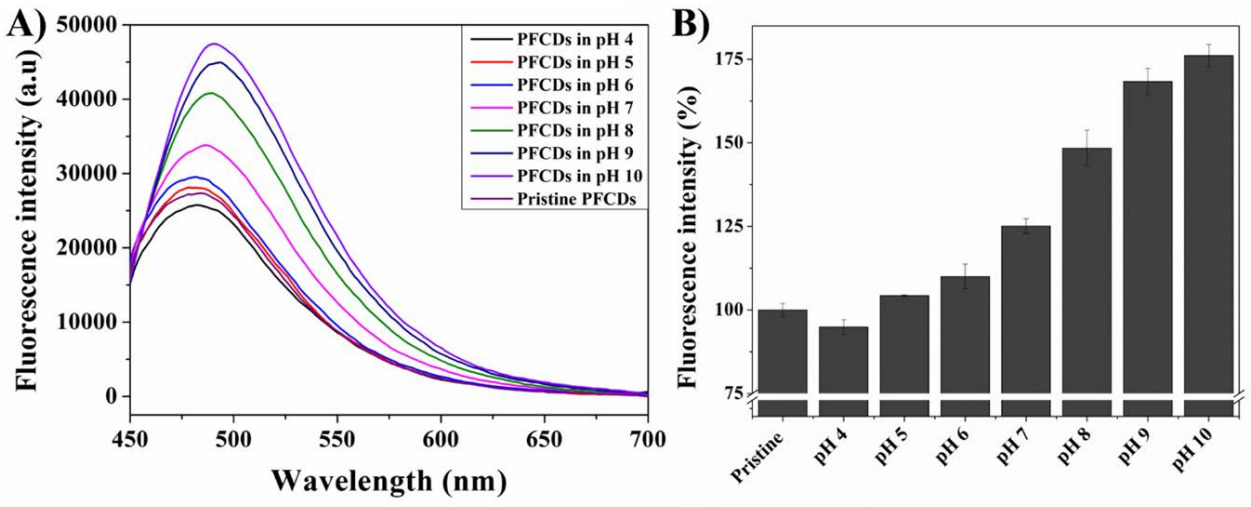

Fig. S4. Fluorescence stability of PFCDs in different pHs. A) Fluorescence emission curve of PFCDs at pH 4-10 after excited at 420 nm wavelength. B) Normalized fluorescence intensity of PFCDs at different pHs.

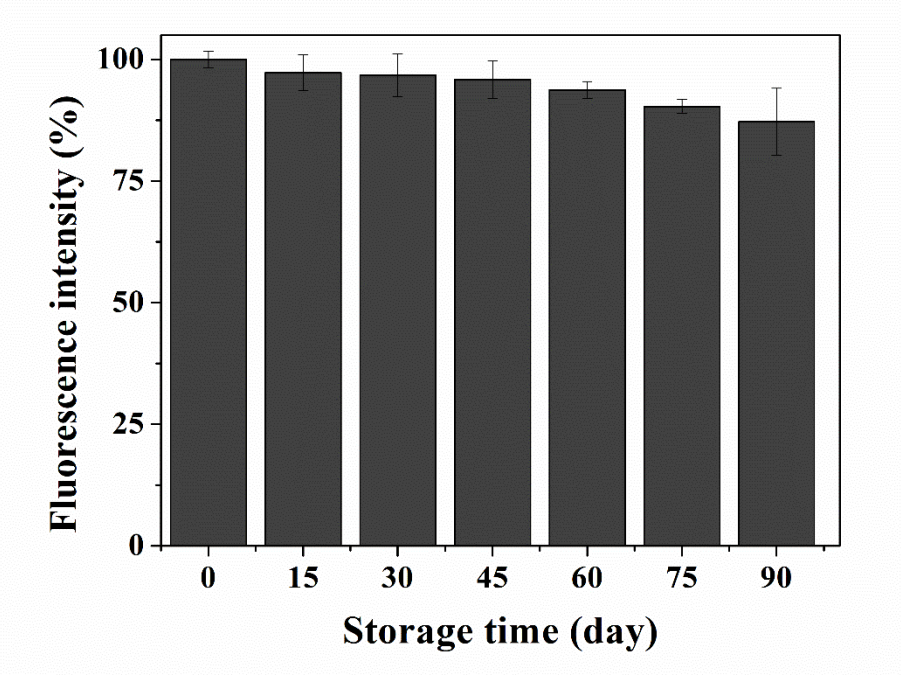

Fig. S5. Fluorescence stability of PFCDs after storing for 90 days.

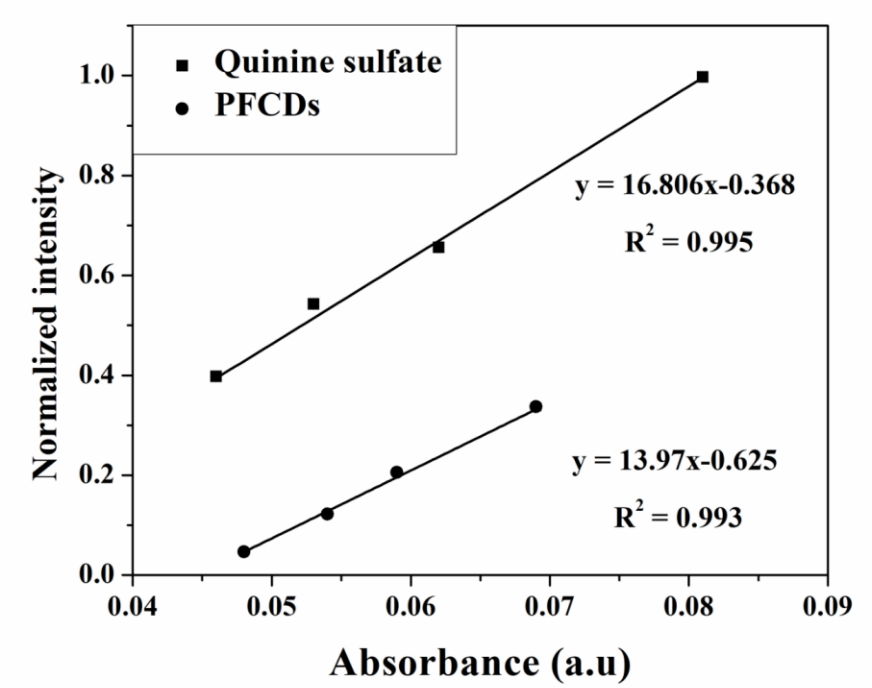

Fig. S6. Plot of integrated PL intensity versus the corresponding absorbance for quinine sulphate and PFCDs.

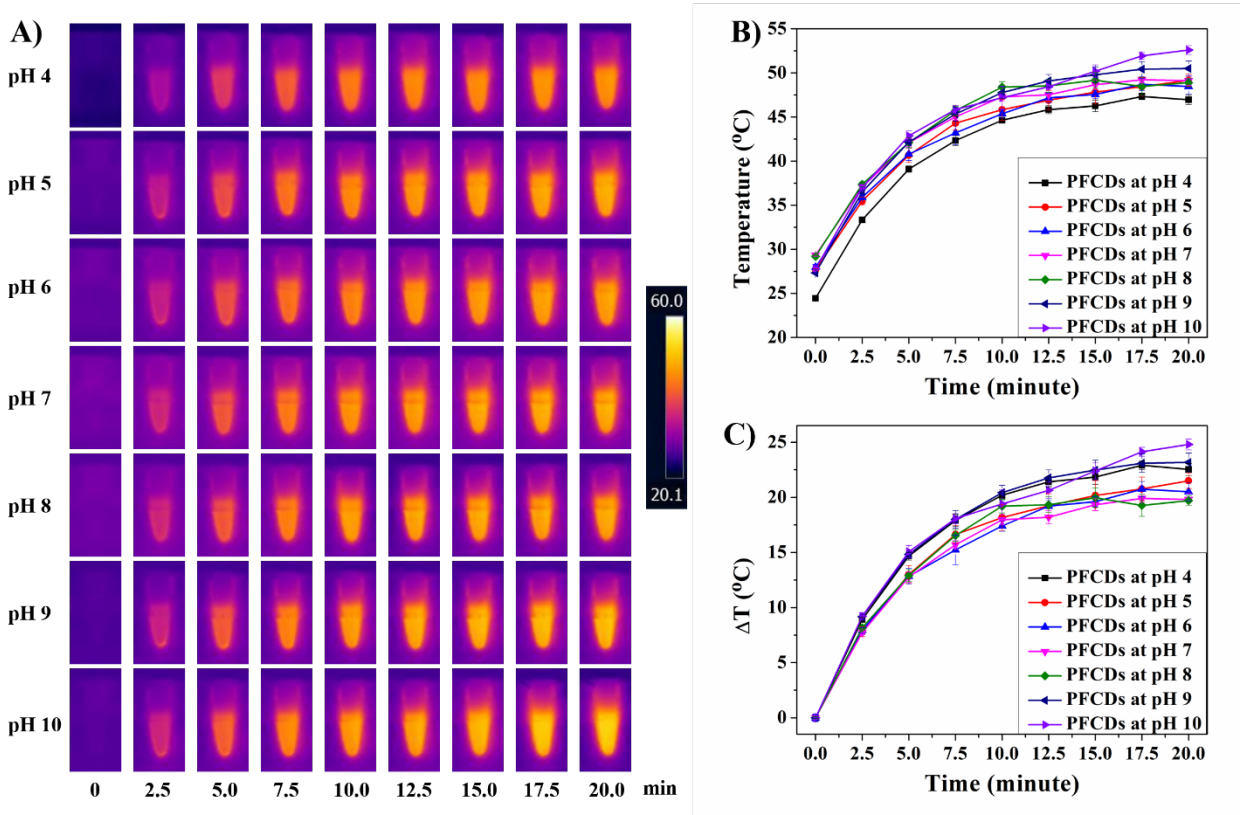

Fig. S7. Photothermal performance of PFCDs at different pHs. A) Infrared thermal image of PFCDs aqueous solution under 808 nm laser irradiation (1.5 W cm^{-2}) with increasing irradiation time from 0 min to 20 min. B) Temperature increment of PFCDs at various pHs after 808 nm irradiation time for 20 min. C) Normalized heating curve of PFCDs in different pHs after exposed to 808 nm laser irradiation for 20 min.

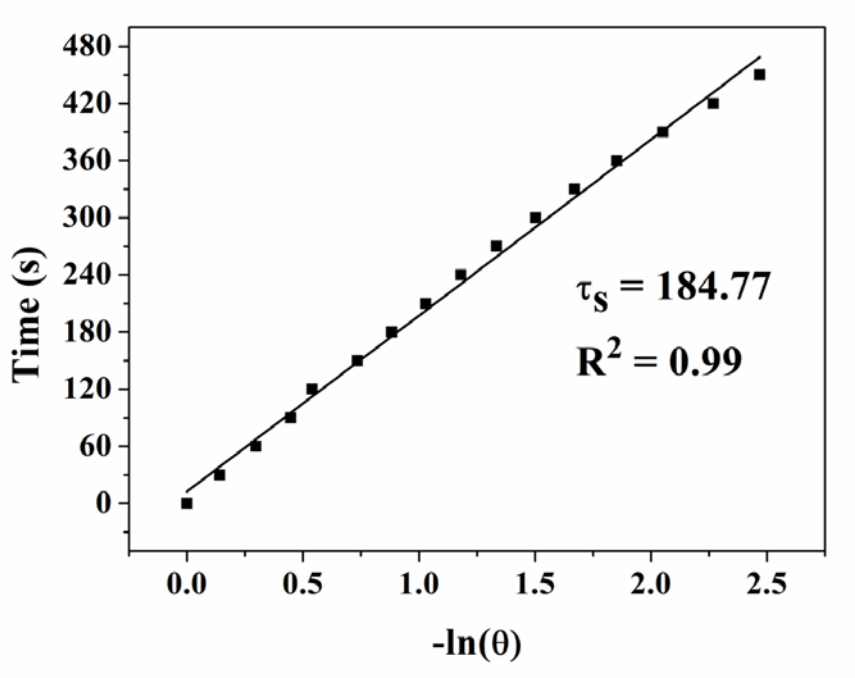

Fig. S8. Time constant for heat transfer is determined to be 184.77 s by applying linear time data versus - ln(θ) from the cooling period.

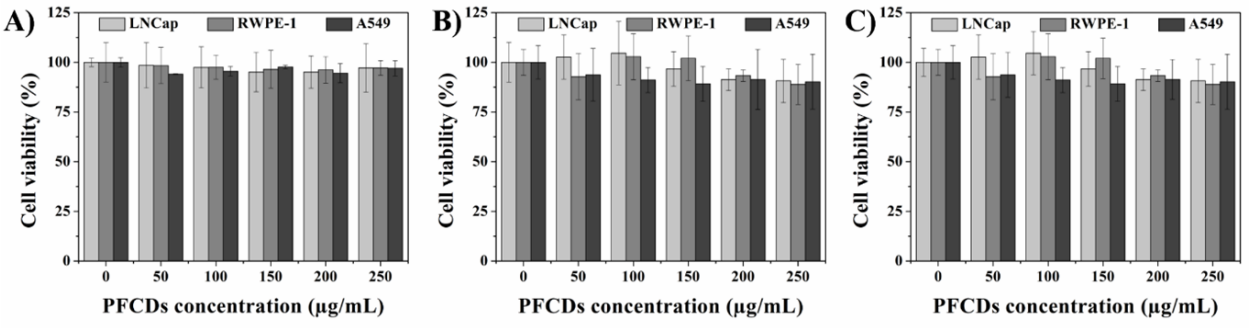

Fig. S9. Relative cell viability of A549, RWPE-1 and LNCaP after incubation with various concentrations of PFCDs for A) 6 h, B) 12 h, and C) 24 h.

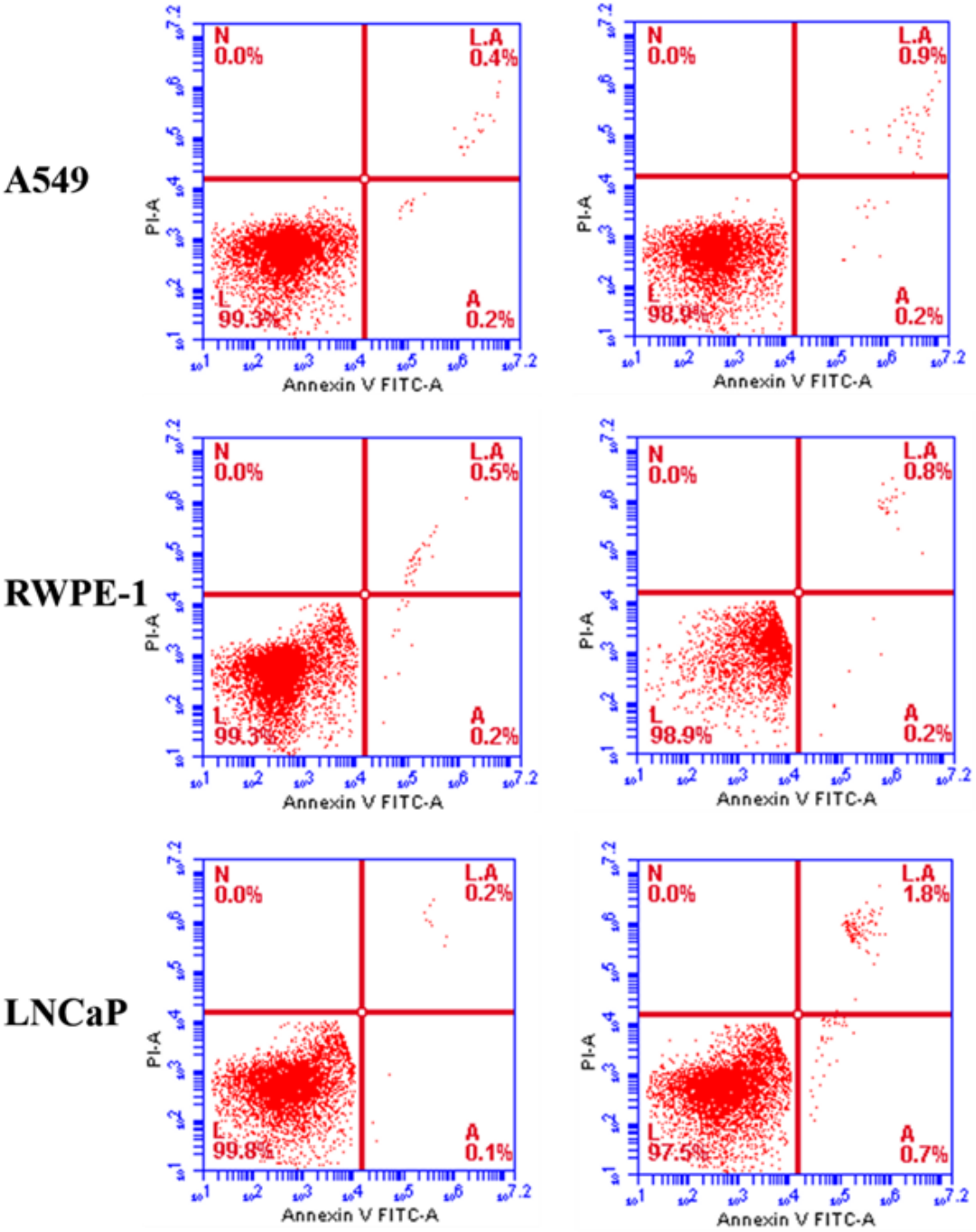

Fig. S10. Flow cytometric analysis of A549, RWPE-1 and LNCaP cells after treatment with PFCDs.