Supplementary Information

Doxorubicin-Polysorbate 80 Conjugates: Targeting Effective and Sustained Delivery to the Brain

S. Ram Prasad [†, a *], Sruthi Sudheendran Leena [b], Ani Deepthi [b], Resmi. A. N [c], Ramapurath S. Jayasree [c], Sandhya K.S [b], A. Jayakrishnan [¶, a, b *]

[a] Division of Chemical Biology, Rajiv Gandhi Centre for Biotechnology, Jagathy, Trivandrum 695 014, Kerala, India

[b]Department of Chemistry, University of Kerala, Kariavattom, Trivandrum 695 581, Kerala, India.

[c]Biophotonics and Imaging Laboratory, Biomedical Technology Wing, Sree Chitra Tirunal Institute for Medical Sciences and Technology, Trivandrum 695 012, Kerala, India.

*Corresponding author. ORCiD ID 0000-0003-2738-6161, ORCiD ID 0000-0003-3890-6230

Email: jayakrishnana@rgcb.res.in, jayakrishnan1953@gmail.com, dr.rps1789@gmail.com

†Present address: Department of Chemical & Biological Engineering, Colorado School of Mines, 1613 Illinois St, Golden, Colorado 80401, United States.

¶Present address: Department of Chemistry, University of Kerala, Kariavattom Campus, Thiruvananthapuram 695 581 Kerala, India.

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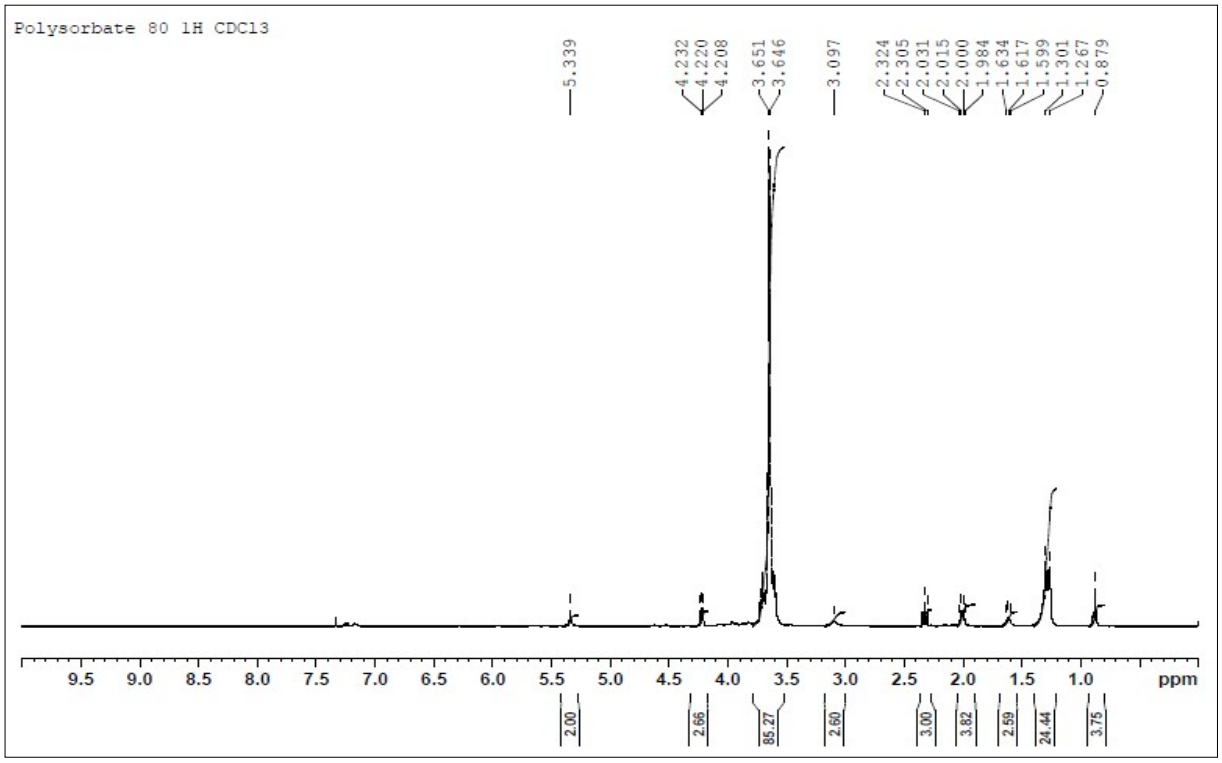

Fig. S1. ^{1}H NMR spectrum of Polysorbate 80

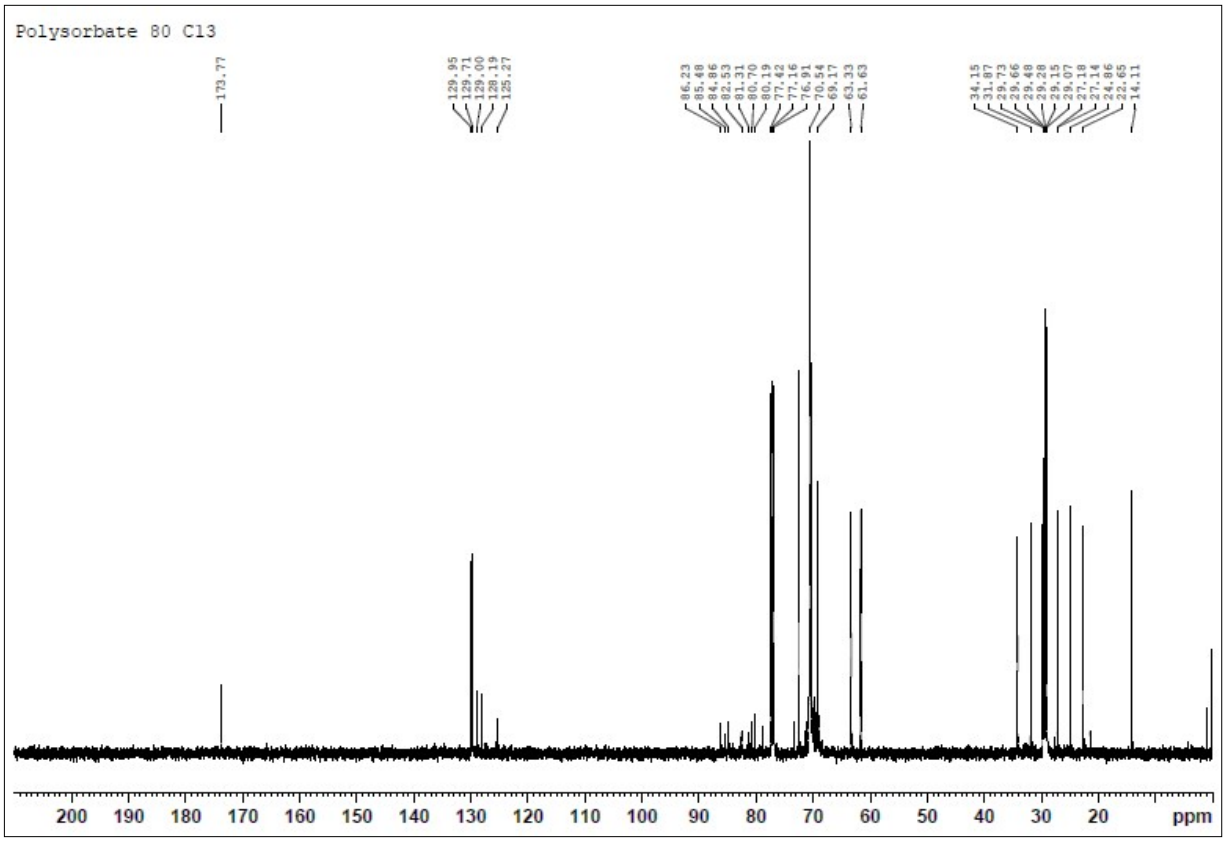

Fig. S2. ^{13}C NMR spectrum of Polysorbate 80

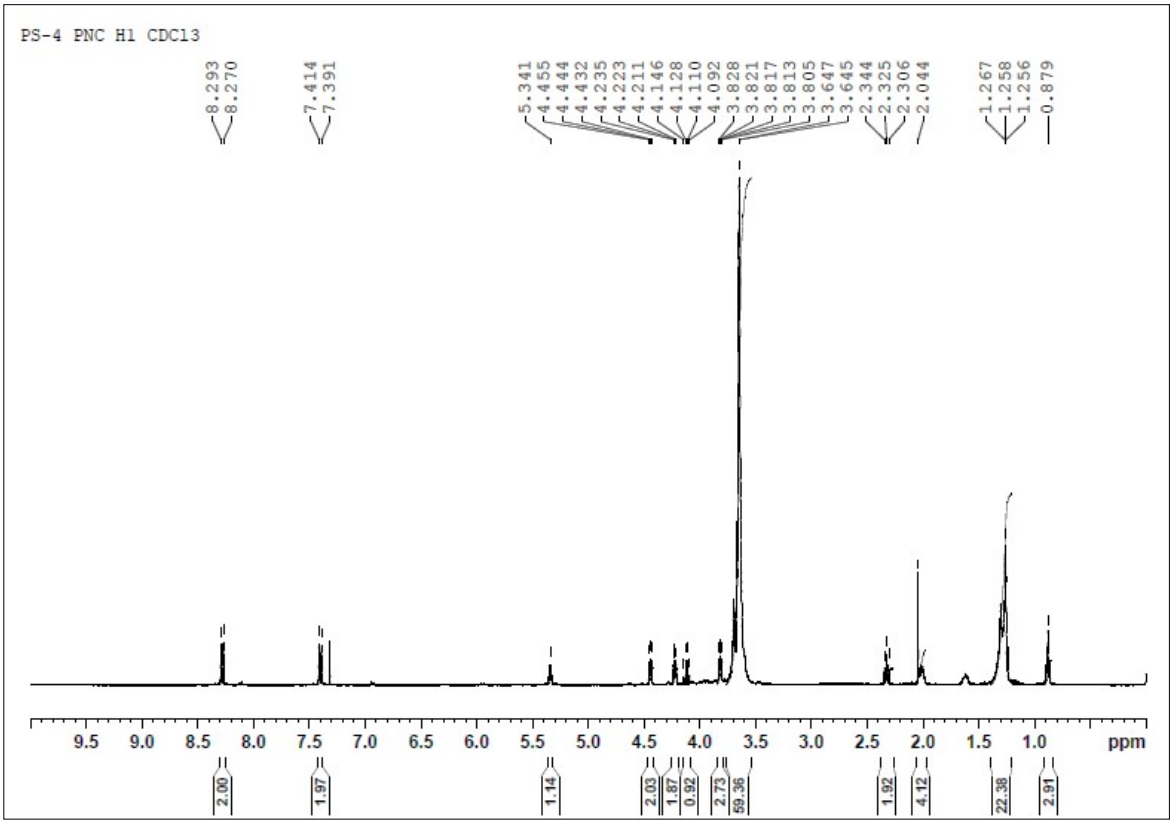

Fig. S3. ^{1}H NMR spectrum of Polysorbate 80-(4-nitrophenyl carbonate)

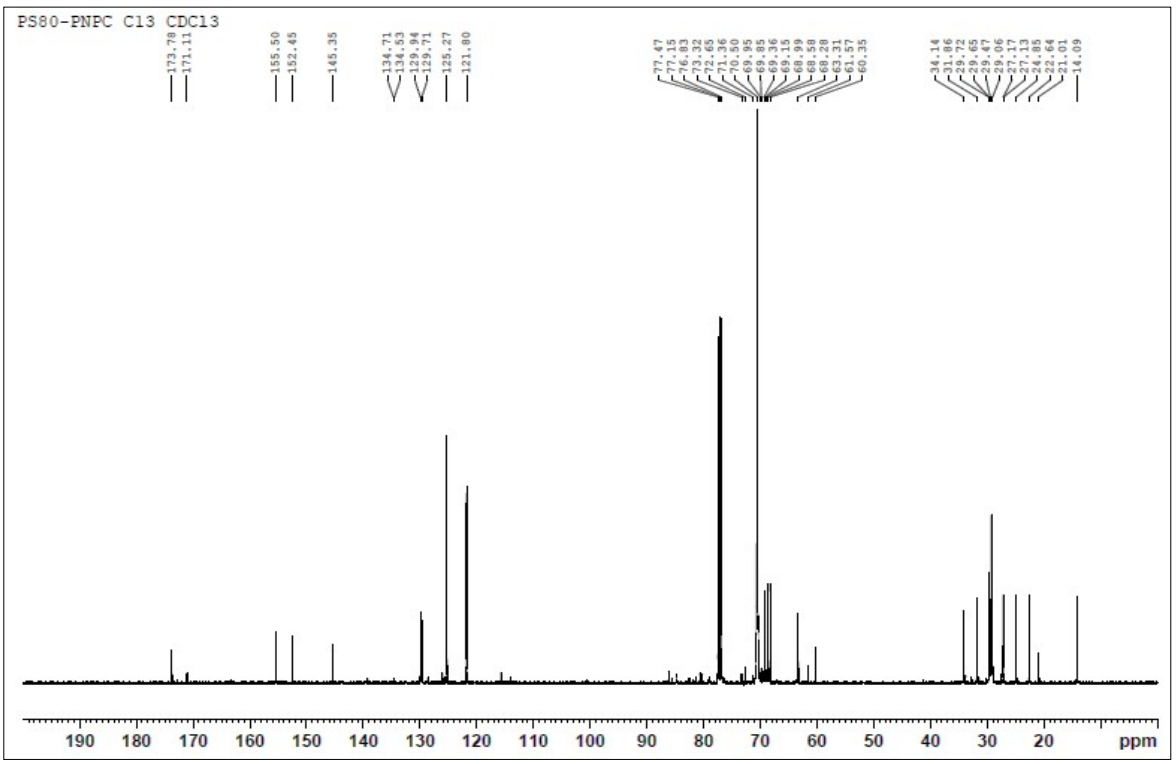

Fig. S4. ^{13}C NMR spectrum of Polysorbate 80-(4-nitrophenyl carbonate)

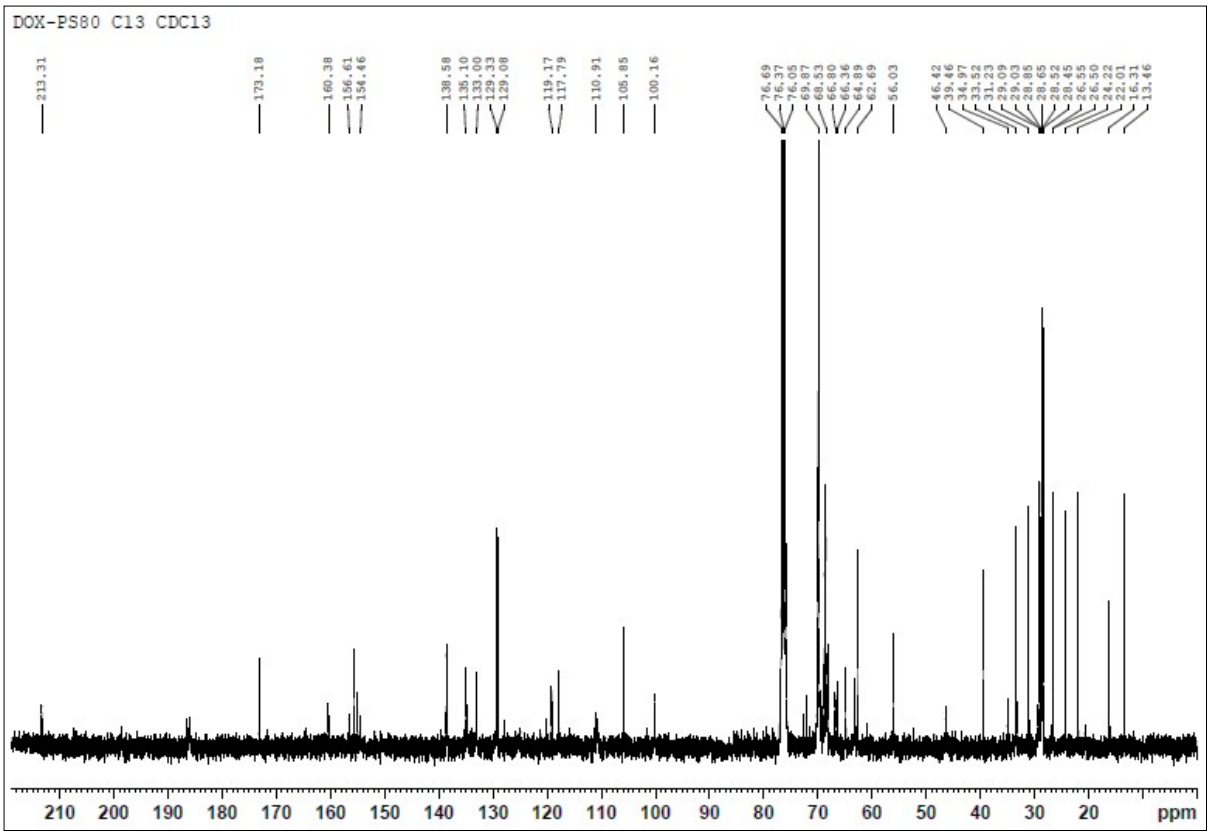

Fig. S5. ^{13}C NMR spectrum of DOX-Polysorbate 80 Conjugate

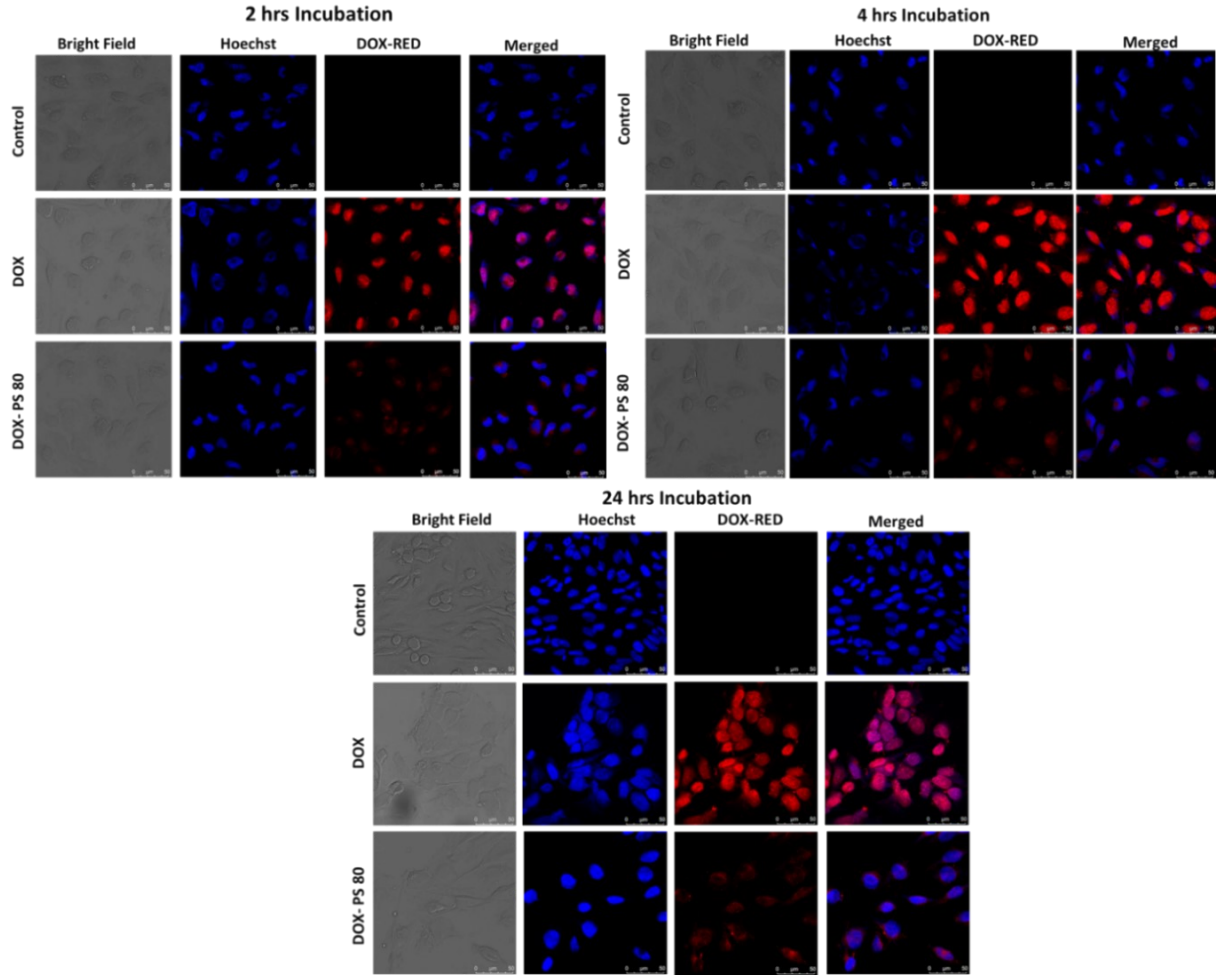

Fig. S6. Cellular uptake studies at 2, 4 and 24 hr incubation by confocal imaging

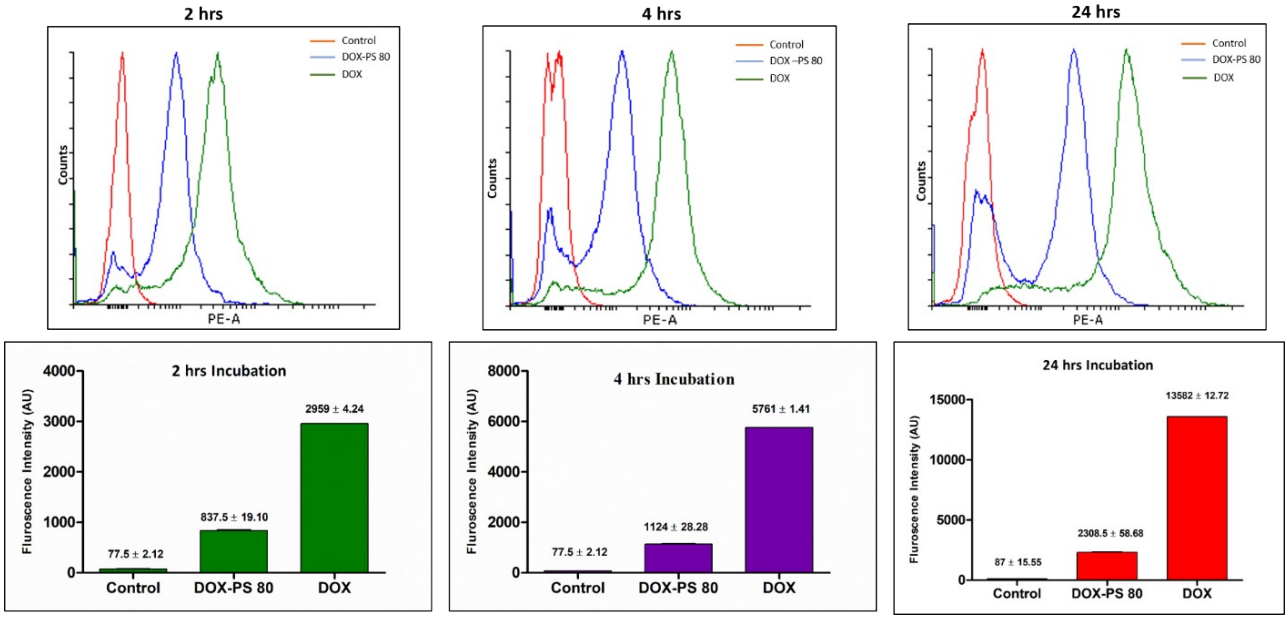

Fig. S7. The intra-cellular uptake and mean fluorescence intensity for DOX-PS 80 and DOX using flow cytometry.

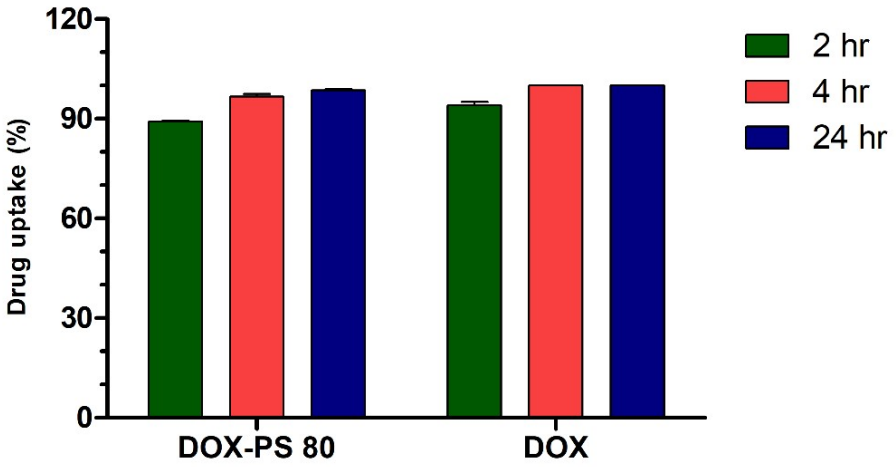

Fig. S8. Percentage of **d**rug uptake of DOX-PS 80 and DOX by flow cytometry at different time points

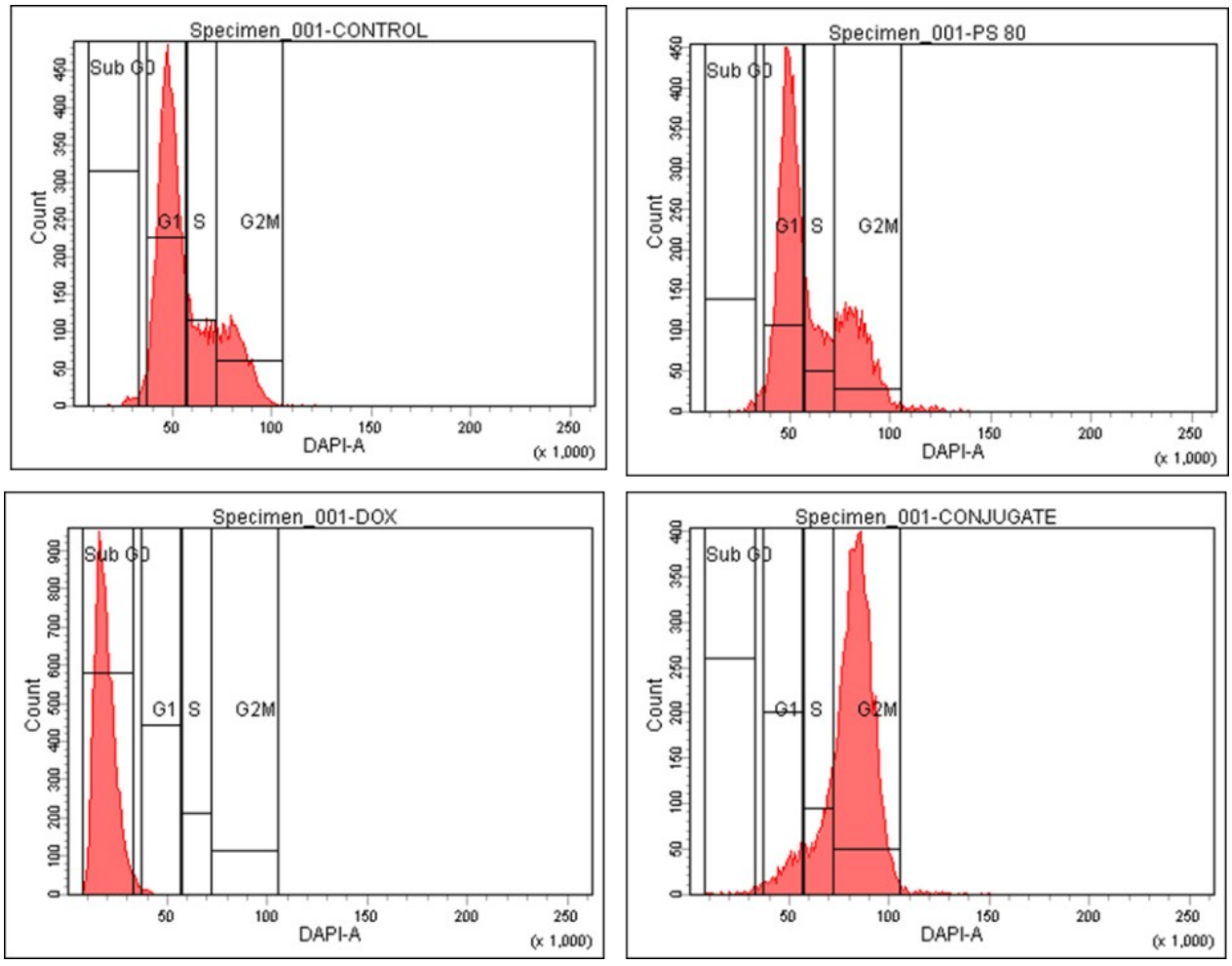

Fig. S9. Cell Cycle Analysis by Flow cytometry

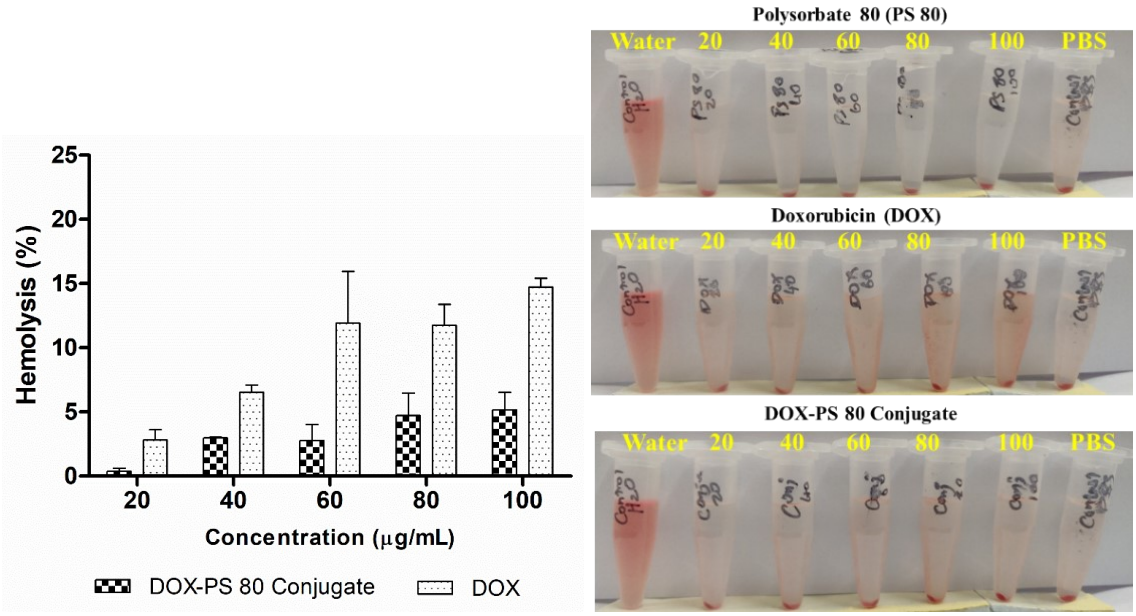

Fig. S10. Hemolytic assay for DOX-PS 80 and DOX at different concentration

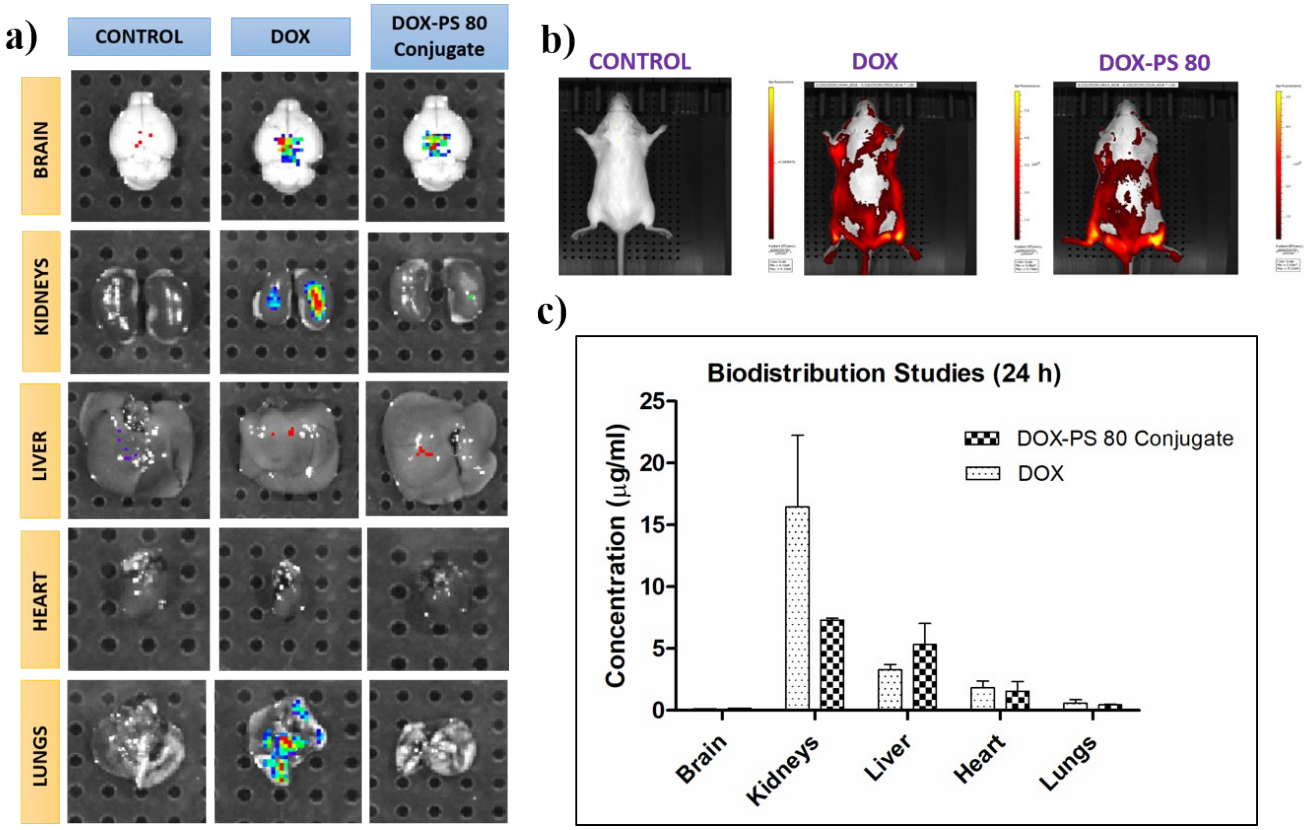

Fig. S11. IVIS fluorescence image of different organs after 24 h drug treatment (a), whole live animal image at 24 h (b), Quantitative estimation of DOX and DOX-PS 80 in organs (c)

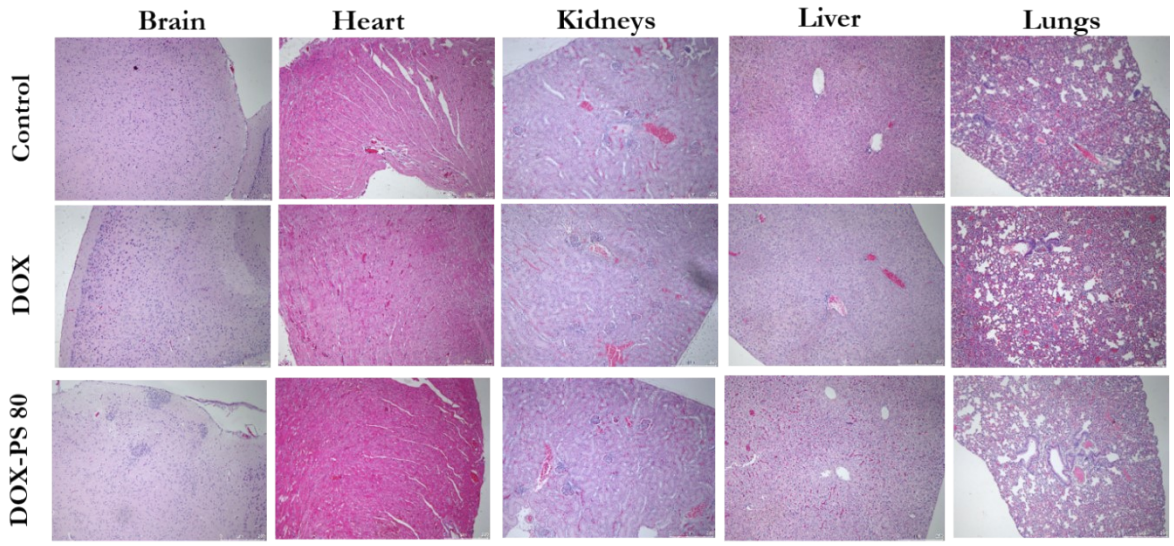

Fig. S12. Histopathological Observations of brain, heart, kidneys, liver, and lungs tissues after 24 h drug treatment in Swiss albino mice.

Table S1. Concentration of DOX and DOX-PS 80 in Organs at 24 h

Organs	Doxorubicin (µg/ml)	DOX-PS 80 Conjugate (µg/ml)
Brain	0.11 ± 0.022	0.16 ± 0.03
Kidneys	16.48 ± 8.14	7.30 ± 0.21
Liver	3.29± 0.62	5.32 ± 2.42
Heart	1.85± 0.77	1.54 ± 1.11
Lungs	0.58 ± 0.40	0.44 ± 0.09