Electronic Supplementary Material (ESI) for Toxicology Research.

Supporting documents

Low toxic synthetic dendrimer conjugated podophyllotoxin nanodevice with potent antitumor activity against DMBA/TPA induced mouse skin carcinogenesis model

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Figure S1: ^{1}H-NMR of the compound PODO-linker in $CDCl_3$.

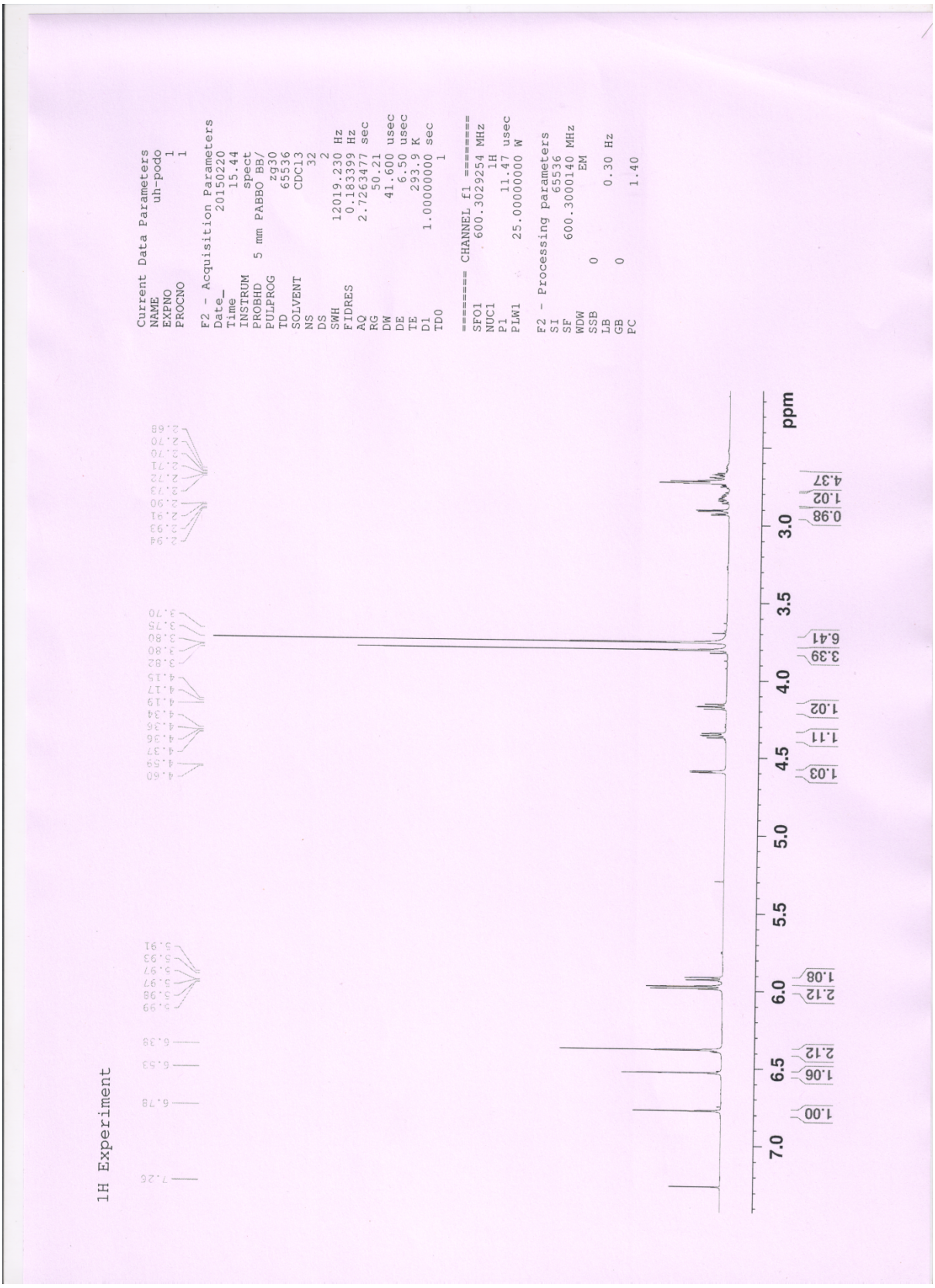


Figure S2: ^{13}C-NMR of the compound PODO-linker in $CDCl_3$

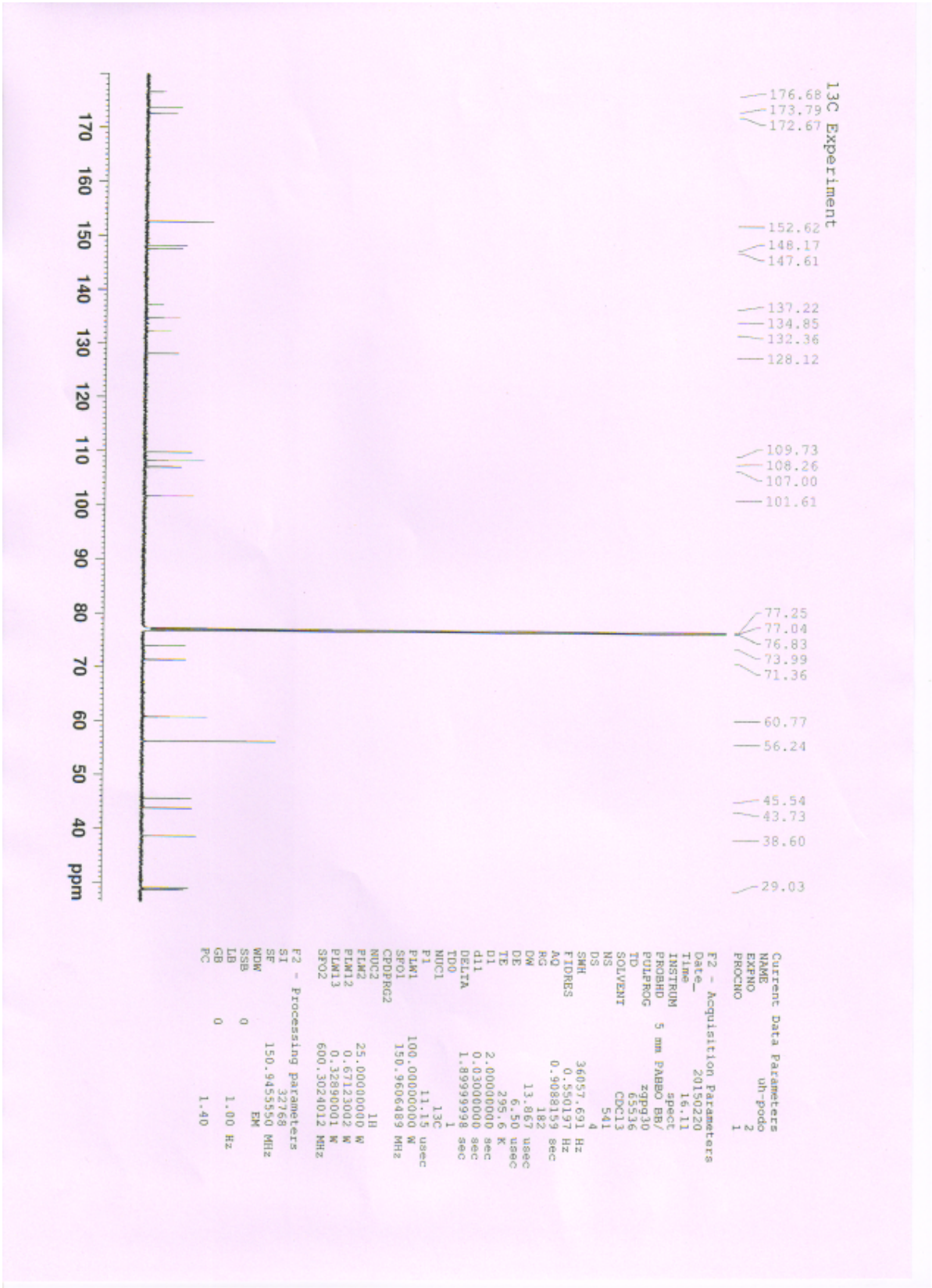
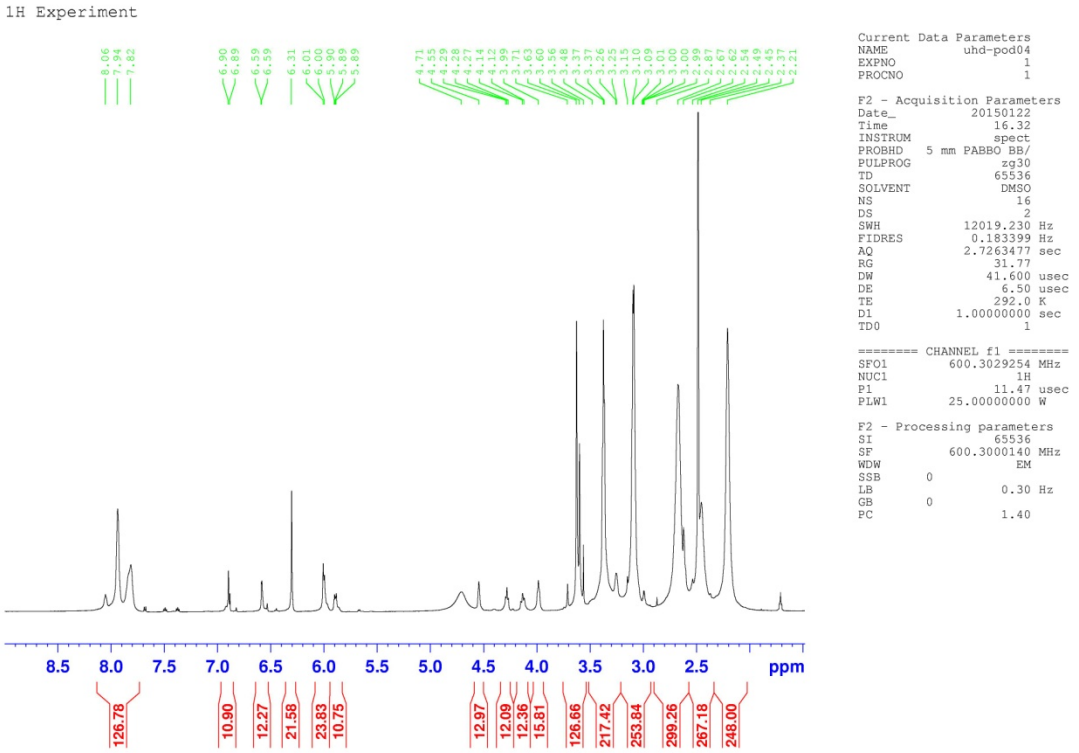


Figure S3: [1]H-NMR of the compound D-PODO-linker in DMSO



[1]H-NMR (600 MHz, DMSO-d_6): 7.81-8.05(m, amide –NH from D), 6.89 (s, 1H, Ar-H8), 6.59 (s, 1H, Ar-H5),6.30(s, 2H, Ar-H-2´ & 6´), 6.00(m,2H, H-13), 5.89 (m, 1H, H-4), 4.54 (CH_2-O from D), 4.27 (m, 1H, H-1),4.12(m, 1H, H-11), 3.98 (m, 1H, H-11), 3.61 (s, 3H, -OCH_3 –H), 3.63 (s, 6H, -OCH_3 –H), 3.25-2.20 (m, H-2, H-3, and proton from PODO-linker (a & b), and internal D-proton).

Figure S4. MALDI-TOF-MS showing increase in the molecular weight of the dendrimer conjugates. The relative change in molecular weight upon conjugation of linker attached PODO to the dendrimer (D). D (13573) and D-PODO (17464) conjugate; also previous generation D (6853) and conjugate D-PODO (8950)

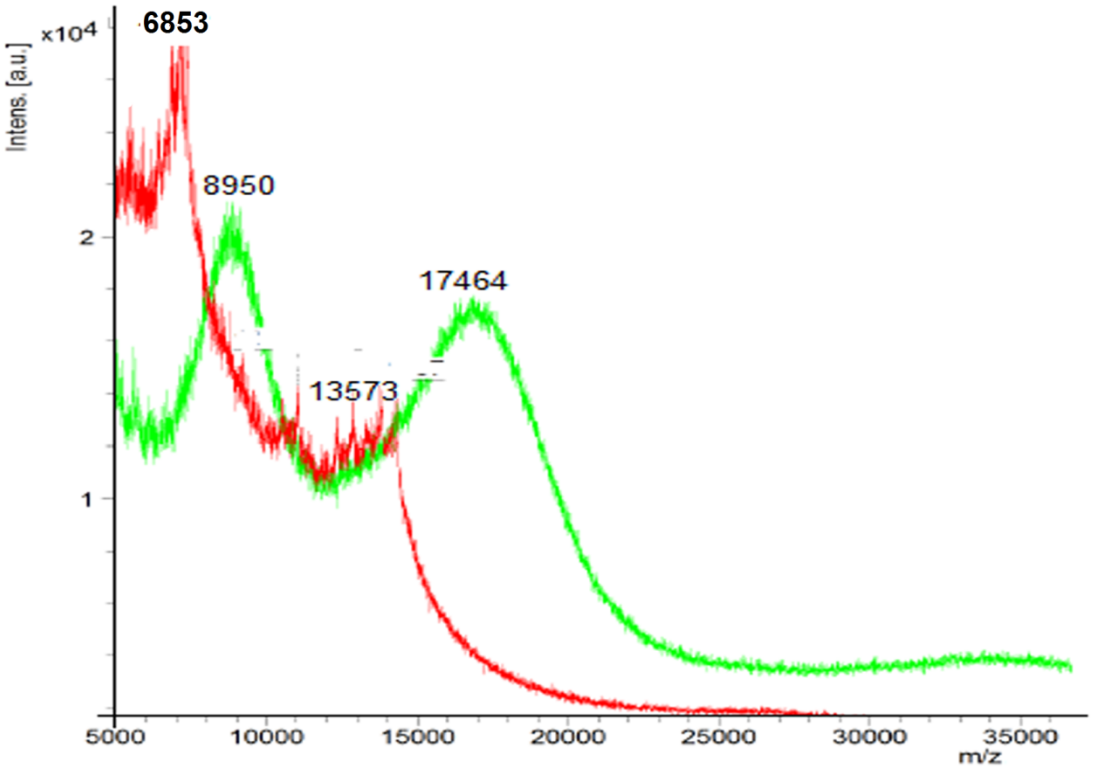
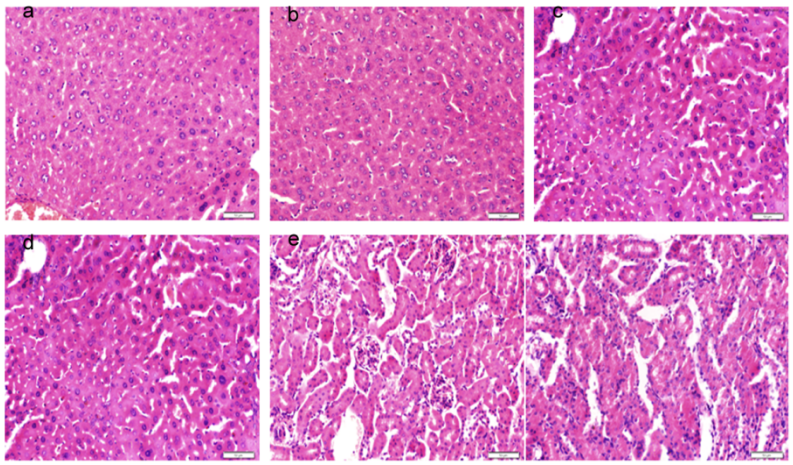


Figure S5: Histopathological data for toxicity evaluation



Histopathalogical analysis (20x) of liver (up) and kidney (down) after 14 week of treatment schedule alone with concomitant topical application of carcinogen. (a and d: carcinogen control; b and e: 4 mg/kg D-PODO treatment group; c and f: 8 mg/kg treatment of D-PODO. Observation indicates there were not much change of hepatocytes and kidney cell after long term treatment with D-PODO.

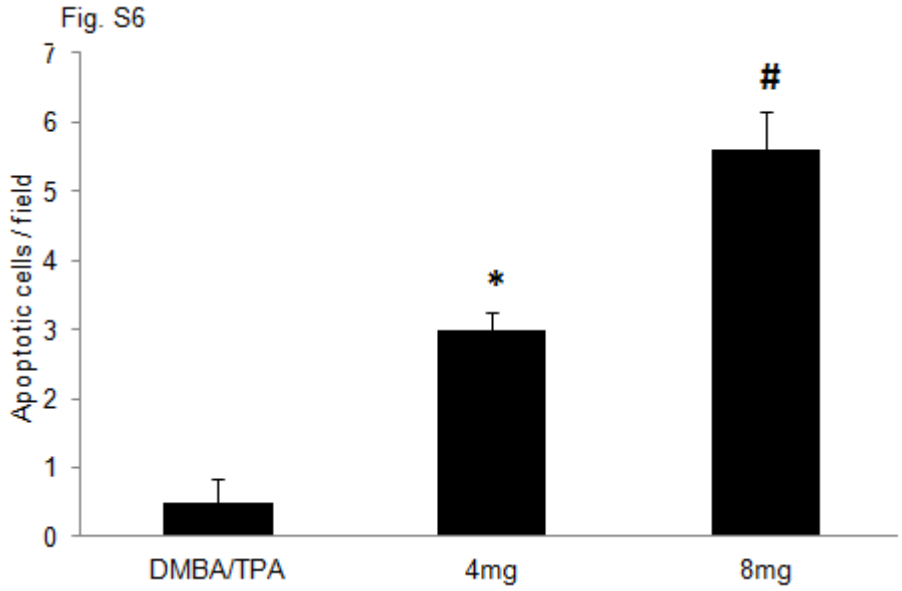


Figure 6: Graphical representation of apoptotic cells of DMBA-TPA (carcinogen control), 4 mg/ kg and 8 mg/kg treatment groups. (*): The compares made between the control and 4 mg group and the significance level is $p<0.05$ and (#): 8 mg group compared in between 4 mg as well as with control group, level of significance is $p<0.05$.

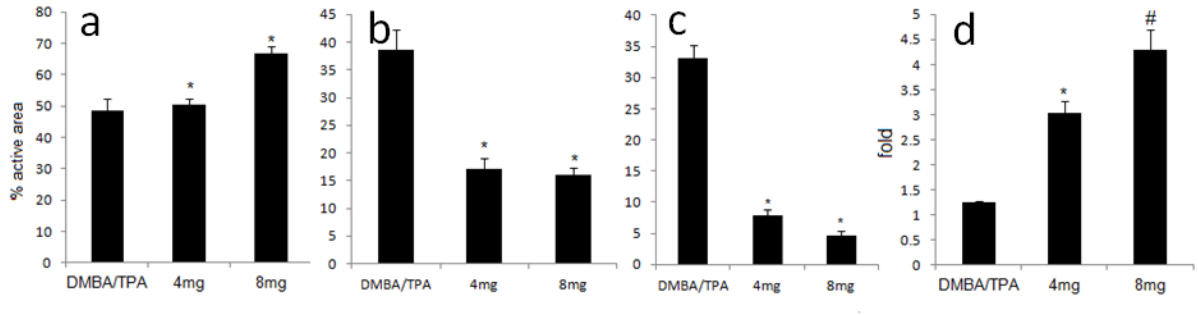


Figure S7. D-PODO induced expression of Bax (a); Bcl2(b), NFκB(c) and Bax/Bcl2 (d) ratio: graphical representation of the active area and their statistical significance; mean± SEM compares made between DMBA/TPA and the treatment group, data were significance upto *p> 0.05, whereas # indicated data were significance in compares to DMBA/TPA and 4 mg treatment group.