

Supporting Information

Chemicals: Triamcinolone acetonide was purchased from Baoman Biotechnology (Shanghai; China), Succinic anhydride was obtained from Sigma-Aldrich (USA). Chemical reagents and solvents were used as received from commercial sources. Commercially available reagents and solvents were used without further purification, unless noted otherwise.

Synthesis of succinated triamcinolone acetonide (STA)

According to this method, the yield of STA was about 85%. The residue pyridine in the crude product was removed by washing with diluted HCl for three times.

General methods: ^1H NMR (Bruker ARX 400) was used to characterize the synthesized compounds. Rheology test was done on an AR 2000ex (TA instrument) system, 40mm parallel plates was used during the experiment at the gap of 500 μm .

Characterization of succinated triamcinolone acetonide (STA): ^1H -NMR (300 MHz, DMSO- d_6) δ 7.26 (d, J = 10.1 Hz, 1H), 6.21 (dd, J = 10.1, 1.8 Hz, 1H), 5.99 (s, 1H), 5.48 (d, J = 3.9 Hz, 1H), 5.13 (d, J = 17.9 Hz, 1H), 4.85-4.71 (m, 2H), 4.22 – 4.13 (m, 1H), 2.67 – 2.54 (m, 4H), 2.43 – 2.27 (m, 2H), 2.06 – 1.75 (m, 4H), 1.74 – 1.66 (m, 1H), 1.59 – 1.44 (m, 6H), 1.37 – 1.29 (m, 5H), 1.13 (s, 3H), 0.81 (s, 3H).

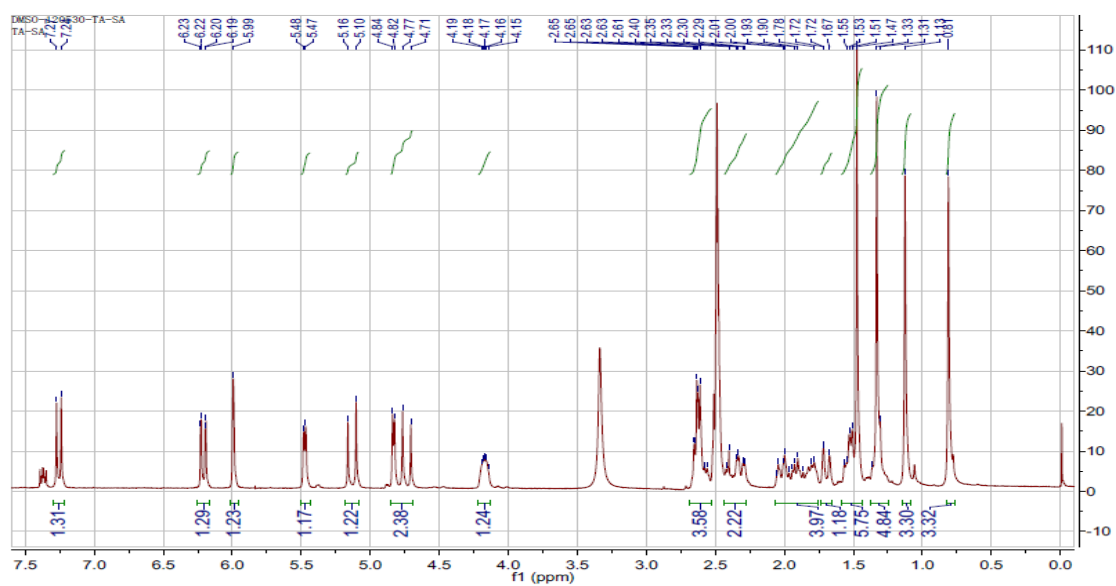


Fig. S-1. ^1H NMR of Succinated triamcinolone acetone

SEM observation: The morphological characterization of TA suspension (Transton®) was performed by scanning electron microscopy (JSM-5900LV, JEOL, Japan). TA suspension was sputtered with gold, placed at cabinet drier for 24 h before the observation.

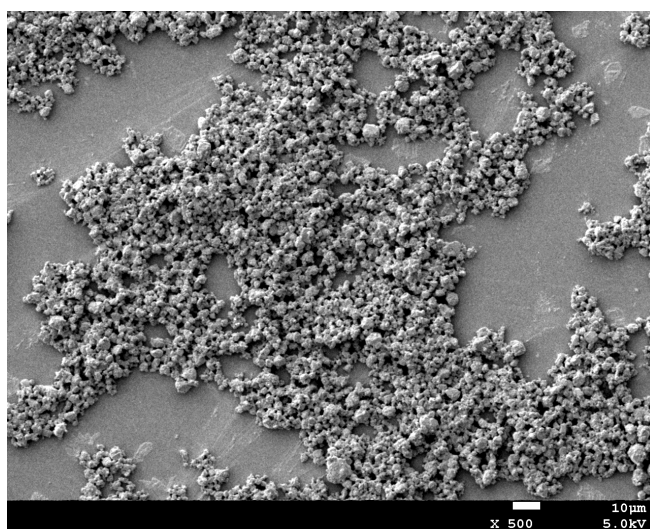


Fig. S-2 SEM image of TA suspension (Transton®)