

Figure S1. ¹H-NMR of Dex, OA, SA and SA-Dex-OA.

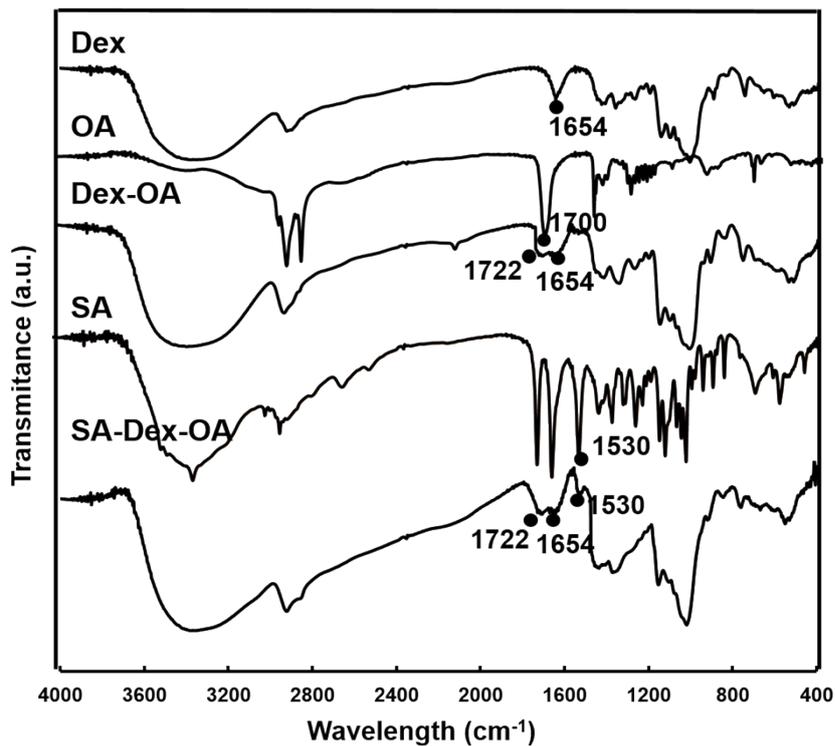


Figure S2. IR spectrum of Dex, OA, SA, Dex-OA and SA- Dex-OA

Table S1. Characteristics of MTX-loaded micelles

Type of micelles	dn (nm)	PDI	DL (%)	EE (%)
SA-Dex-OA/MTX	117.33±5.77	0.202±0.030	4.28±0.01	89.39±0.26
Dex-OA/MTX	118.90±39.19	0.250±0.041	2.36±0.37	48.39±7.84

dn: hydrodynamic diameter, PDI: polydispersity index,

DL: drug-loading; EE: encapsulation efficiency

Data are presented as mean ± SD. (n = 3).

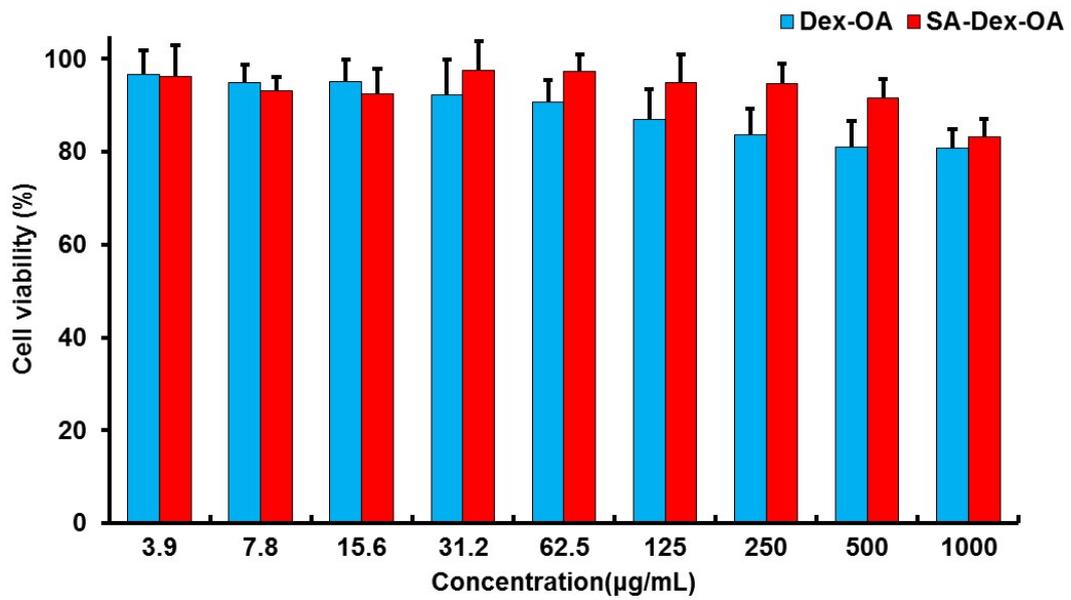


Figure S3. Viability of HUVEC cultures after exposure to SA-Dex-OA micelles or Dex-OA micelles. Viability was calculated relative to that of untreated cells (100%).

Data shown are

mean \pm SD (n= 3).

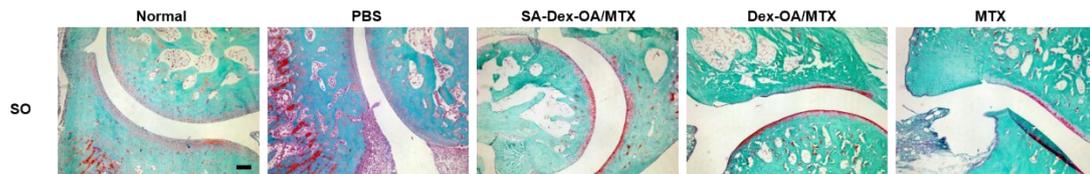


Figure S4. Histopathology in ankle joints was identified using Safranin O staining, scale bar=200 μ m.

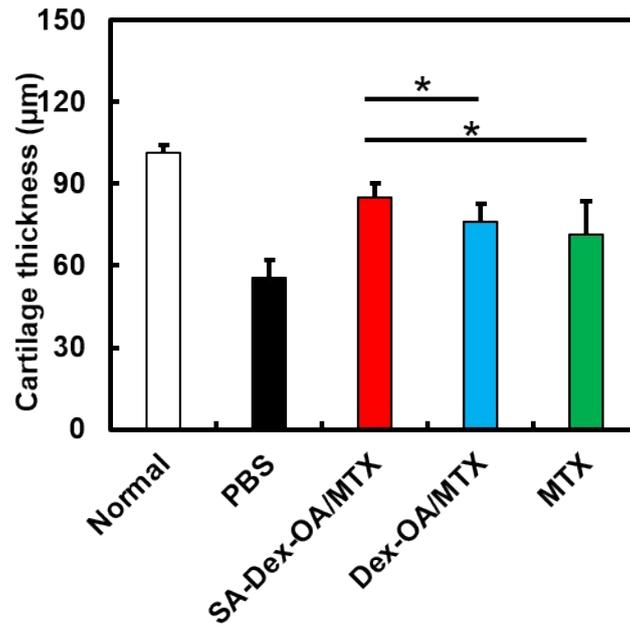


Figure S5. Semi-quantitative analysis of histopathological evaluation in Figure S4 (cartilage thickness).

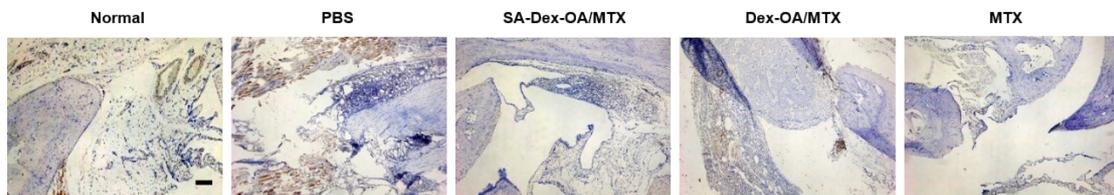


Figure S6. Histology in ankle joints was identified using immunohistochemical staining for MMP-9, scale bar=200µm.