**Supplementary material**

**Figure S1.** TGA first derivative curves of BSA, sodium alginate, 30BSA/70ALG Nps, 40BSA/60ALG Nps and 50BSA/50ALG Nps.

**Table S1.** Percentages (v/v) of BSA (5% w/v) and ALG (1% w/v) solutions added to each blend.

|  |  |  |  |
| --- | --- | --- | --- |
| Nanoparticles | Percentage of BSA-EDAC solution added to the blend (%, v/v) | Percentage of ALG-EDAC solution added to the blend (%, v/v) | Blend composition  (w/w ratio) |
| 30BSA/70 ALG | 30 | 70 | 2BSA:1ALG |
| 40BSA/60 ALG | 40 | 60 | 3BSA:1ALG |
| 50BSA/50 ALG | 50 | 50 | 5BSA:1ALG |

**Table S2 .** Statistical parameters of nanoparticle formulations obtained after fitting the drug release data to the release kinetic models. Model fitting was attempted until 91% and 85% of drug released for PTX-30BSA/70ALG-Fol and PTX-50BSA/50ALG-Fol, respectively.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| NANOPARTICLES | HIGUCHI | KORSMEYER-PEPPAS | | ZERO ORDER | FIRST ORDER |
| KH (h)-1/2 | K (h)-1 | n | K0 (h)-1 | K (h)-1 |
| PTX-30BSA/70ALG-Fol | 0.892 (r2= 0.969) | 0.533 | 0.36 (r2=0.979) | 0.349 (r2=0.791) | 0.094 (r2=0.882) |
| PTX-50BSA/50ALG-Fol | 1.265 (r2=0.978) | 0.299 | 0.70 (r2=0.979) | 0.538 (r2=0.941) | 0.117 (r2=0.979) |