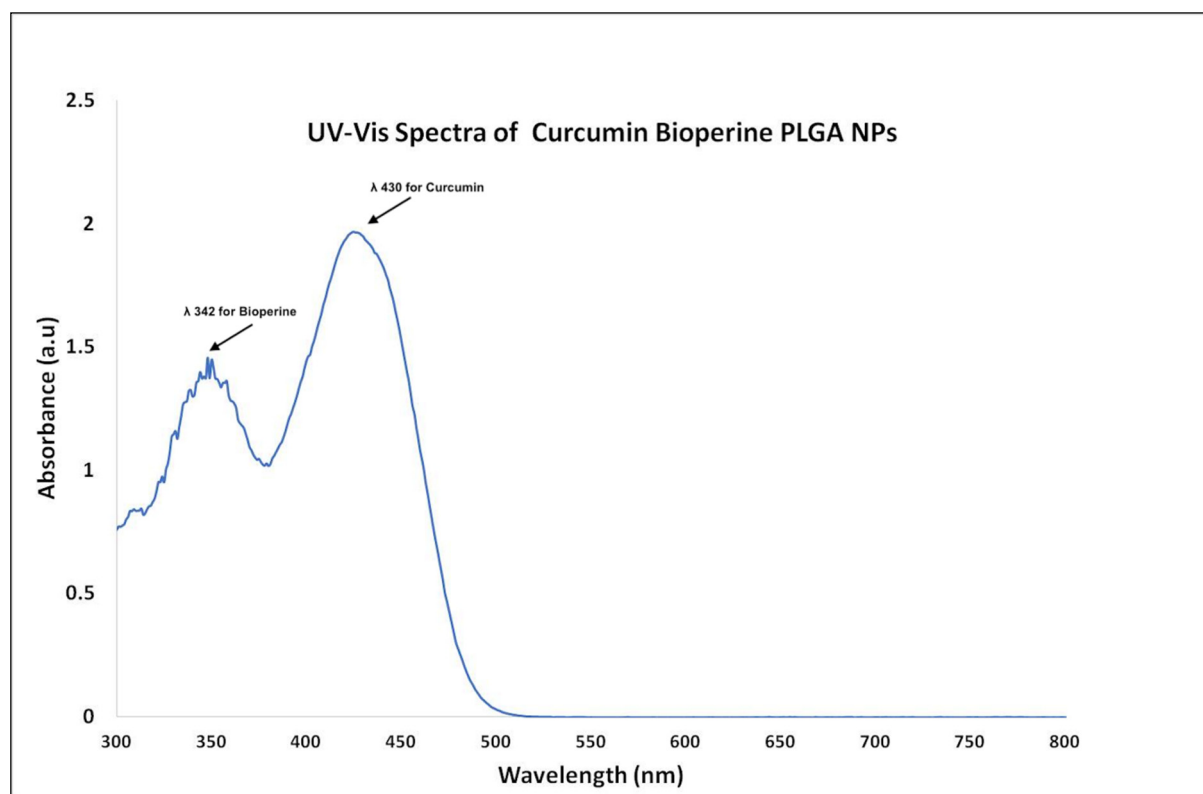
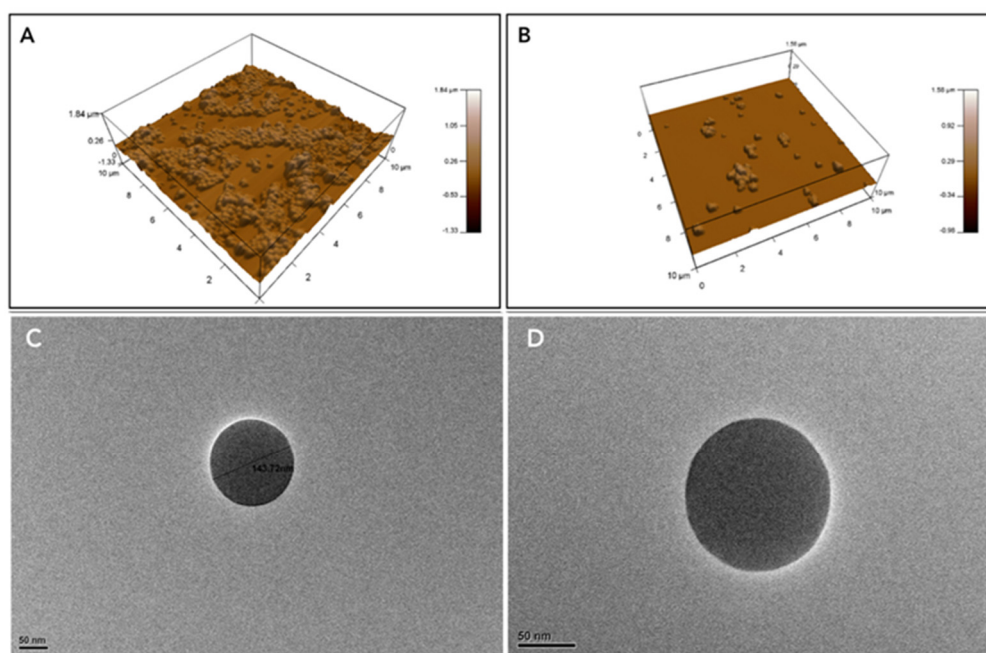


# Supplementary Materials: Co-Delivery of Curcumin and Bioperine via PLGA Nanoparticles to Prevent Atherosclerotic Foam Cell Formation

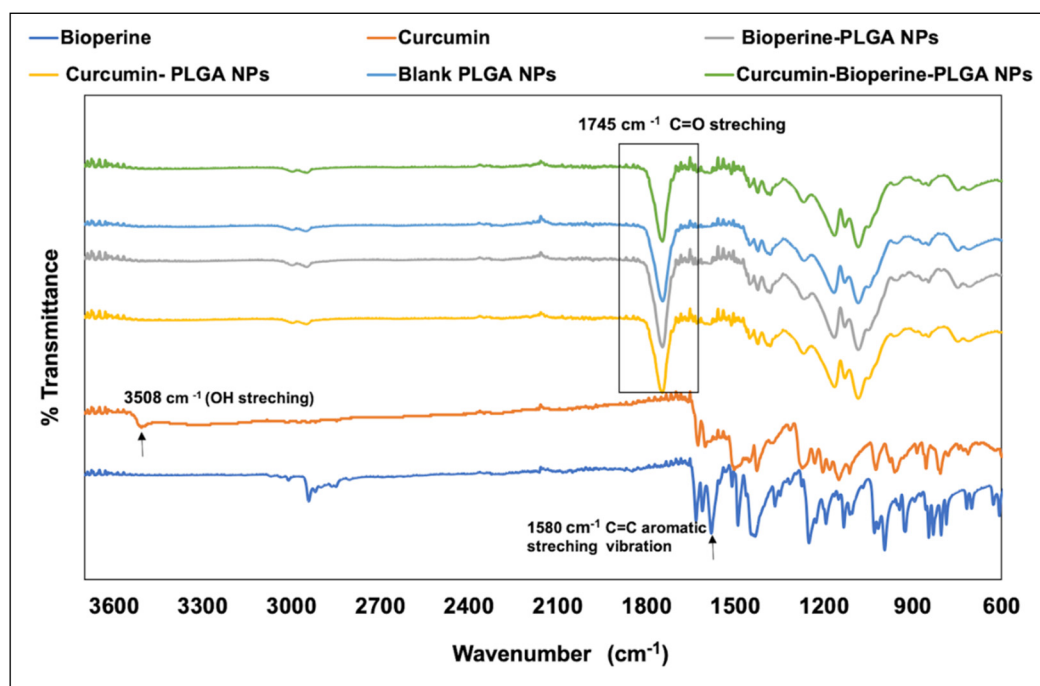
Sindhu C Pillai, Ankita Borah, Minh Nguyen Tuyet Le, Hiroaki Kawano, Kouichi Hasegawa and D. Sakthi Kumar



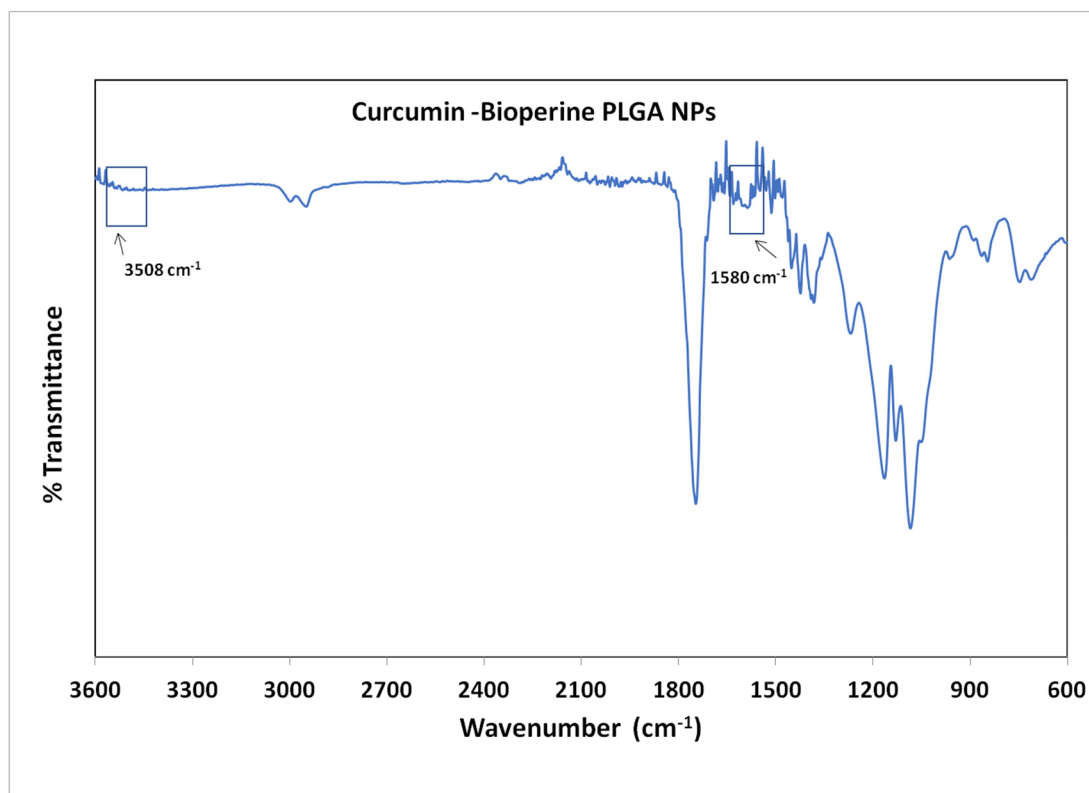
**Figure S1.** UV-Vis spectra of Cur-Bio PLGA NPs showing the encapsulation of Bioperine at  $\lambda_{342}$  and Curcumin at  $\lambda_{430}$ .



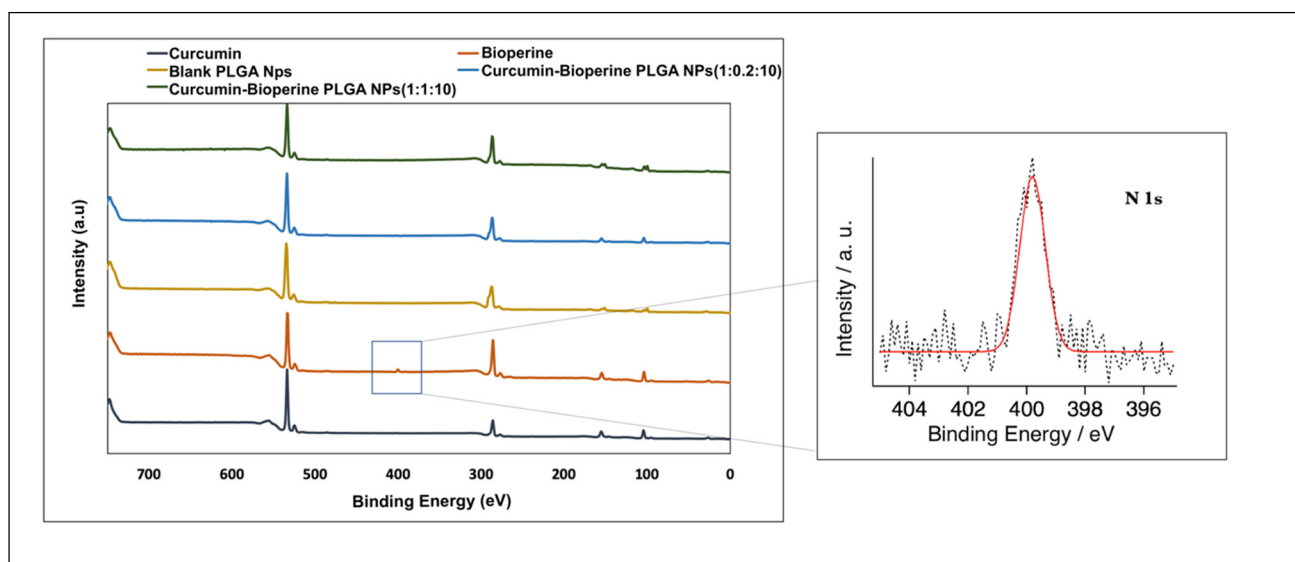
**Figure S2.** 3D AFM images of Curcumin-Bioperine PLGA NPs (A) 1:0.2:10 and (B) 1:1:10. TEM images of Curcumin-Bioperine PLGA NPs (C) 1:0.2:10 and (D) 1:1:10 (At scale 50 nm).



**Figure S3.** FTIR analysis of free Curcumin, free Bioperine, Blank PLGA NPs, Curcumin-PLGA NPs, Bioperine-PLGA NPs, and Curcumin-Bioperine PLGA NPs in the range of 4000 to 500  $\text{cm}^{-1}$ .



**Figure S4.** FTIR spectra of Curcumin-Bioperine PLGA NPs showing the characteristic peaks of curcumin ( $3508 \text{ cm}^{-1}$ ) and Bioperine ( $1580 \text{ cm}^{-1}$ ).



**Figure S5.** XPS Spectra of free Curcumin, free Bioperine, Blank PLGA NPs, and Curcumin-Bioperine PLGA NPs (1:0.2:10 and 1:1:10). The nitrogen (N 1s) peak present in free Bioperine is shown in the inset box. (Si2p and Si2s peaks have arisen from the  $\text{SiO}_2$  substrate).