

## Supplementary Figure Captions

Figure S1: Whole knee image of uninjured joint corresponding to Fig. 4a

Figure S2: Whole knee image of untreated joint corresponding to Fig. 4b

Figure S3: Whole knee image of IGF-1 only treated joint corresponding to Fig. 4c

Figure S4: Whole knee image of IGF-1 nanoplex treated joint corresponding to Fig. 4d

Figure S5: Whole knee image of untreated joint corresponding to Fig. 4e

Figure S6: Whole knee image of IGF-1 nanoplex treated joint corresponding to Fig. 4f

Figure S7: Whole knee image of IGF-1 nanoplex treated joint corresponding to Fig. 4g

Figure S8: Particle size analysis from cryo-electron microscopy. (a) Representative image in grayscale. (b) Image thresholded into black and white for particle analysis. (c) Particles identified by particle analysis algorithm using ImageJ. (d) Histogram of particle sizes