CORRECTION

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Correction: Modulated podosome patterning in osteoclasts by fullerenol nanoparticles disturbs the bone resorption for osteoporosis treatment

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Correction for 'Modulated podosome patterning in osteoclasts by fullerenol nanoparticles disturbs the bone resorption for osteoporosis treatment' by Kui Chen *et al.*, *Nanoscale*, 2020, **12**, 9359–9365, DOI: 10.1039/D0NR01625J.

The authors regret that there were errors concerning Fig. 1, 2 and 6 in the original manuscript. Fig. 1 and 2 were transposed in the original manuscript. Fig. 1 in the original article also displayed incorrect images of the Alizarin red S staining, and is corrected below as Fig. 2. Fig. 6(a) in the original article contained a mistake in the 3D images of the micro CT data.

In addition, Fig. S6 and S8 in the accompanying ESI displayed the wrong hematoxylin and eosin (H&E) staining results.

This correction does not affect the discussion or conclusions of the original article, only the display of the figures. The captions for the figures remain unaltered in content. The correct versions of Fig. 1, 2 and 6, along with their captions, are displayed below. Both the updated and original versions of Fig. S6 and S8 are available in the ESI accompanying the original article.

The Royal Society of Chemistry apologises for these errors and any consequent inconvenience to authors and readers.
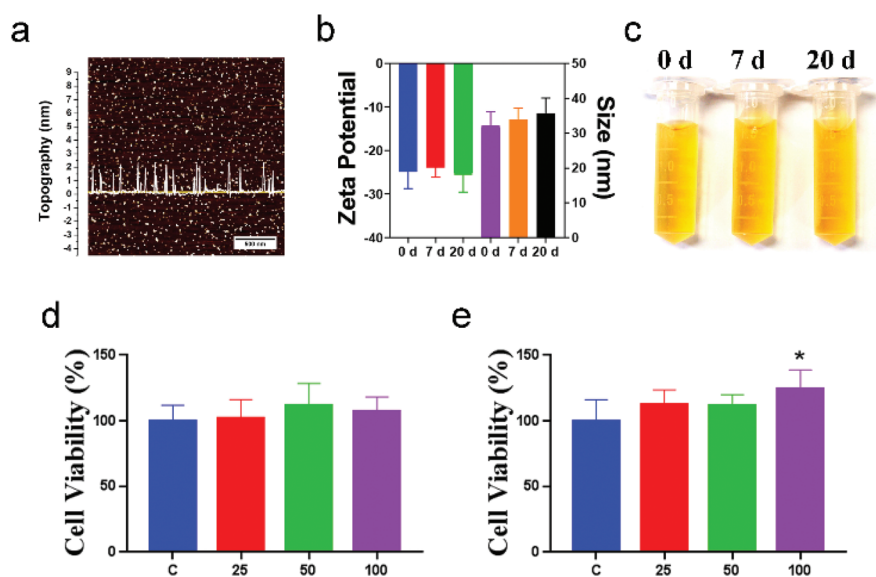

Fig. 1 Characterization of fNPs. (a) AFM images of fNPs and the size distribution on the white line was analyzed. (b) Hydrodynamic size of fNPs and the zeta potential of fNPs in 10% FBS at different days, (c) images of fNPs at 0 day, 7 day, and 20 day; the cell viabilities of (d) BMMSCs and (e) BMMs with various concentrations of fNPs.

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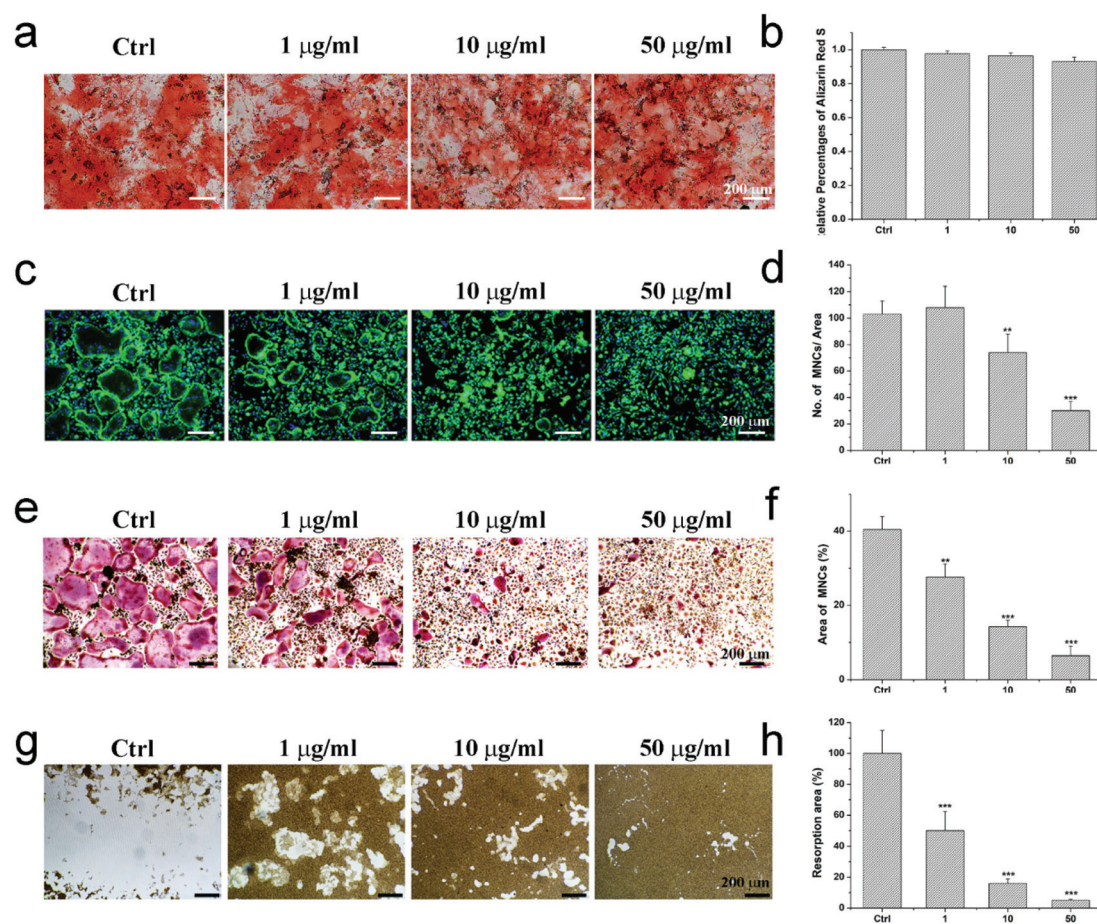
Fig. 2 The effect of fNPs on the osteogenic differentiation of BMMSCs and osteoclastogenesis *in vitro*. (a) BMMSCs were exposed to various concentrations of fNPs (0, 1, 10, and 50 μg ml^{-1}) and induced to differentiate into osteoblasts for 14 days. Alizarin red S was applied to stain the calcium nodules red. Scale bar, 200 μm. (b) Mineralization was quantified following the colorimetric analysis of Alizarin red S elution from calcium nodules. BMMs were exposed to various concentrations of fNPs (0, 1, 10, and 50 μg ml^{-1}). (c) Images of OCs with actin labelled in green and nuclei in blue. Scale bar, 200 μm. (d) Number of multinuclear cells (MNCs, nuclear >3) in the same area with different treatments was counted. Compared with the control group, 10 and 50 μg ml^{-1} of fNPs significantly decreased the number of MNCs. *, $p < 0.05$, **, $p < 0.01$, ***, and $p < 0.001$. (e) Cells were stained with TRAP, an enzyme specifically expressed by OCs. Scale bar, 200 μm. (f) The size of MNCs with TRAP positive cells was significantly decreased with fNP treatment in a dose-dependent way. *, $p < 0.05$, **, $p < 0.01$, ***, and $p < 0.001$. (g) Representative images of bone resorption pits on a Corning Osteo Assay Surface 24 well plate. Scale bar, 200 μm. (h) The resorption area quantified with Image J suggested that fNPs prevented the bone resorption by OCs. *, $p < 0.05$, **, $p < 0.01$, ***, and $p < 0.001$.
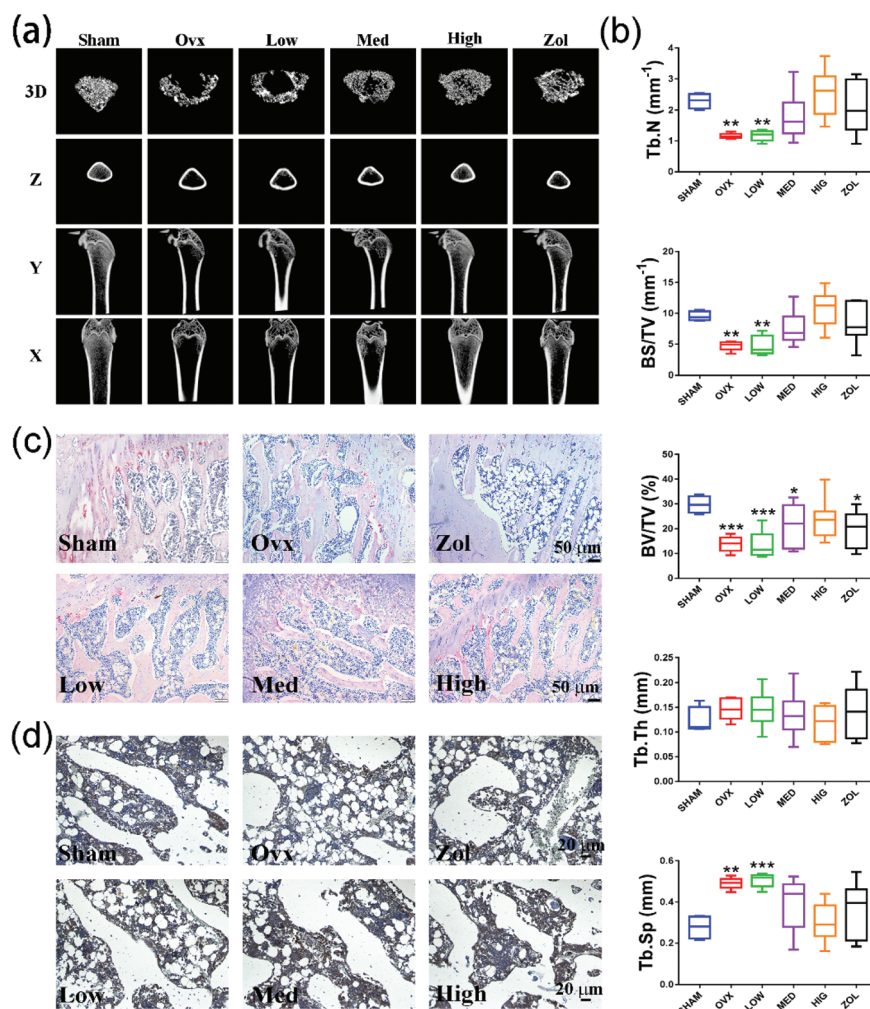
Fig. 6 Significant anti-osteoporosis effect of fNPs in an ovariectomy-induced osteoporosis model. (a) Micro CT examinations of femurs from different groups. Images from Micro CT show that the mass of the well-organized trabecular bone was increased by fNP treatment. (b) The relevant bone parameters have been analysed and collaboratively supported the fact that fNP treatment increased the bone mass. BV/TV means bone volume/tissue volume, BS/TV means bone surface/tissue volume, Tb.N means number of trabecular bone, Tb.Th means thickness of the trabecular bone, and Tb.Sp means space of the trabecular bone. *, $p < 0.05$, **, $p < 0.01$, ***, and $p < 0.001$. (c) TRAP of femur tissues from different groups was stained. Scale bar, 50 μm. (d) Immunohistochemistry staining of BMP-2 on femur tissues. Scale bar, 20 μm.