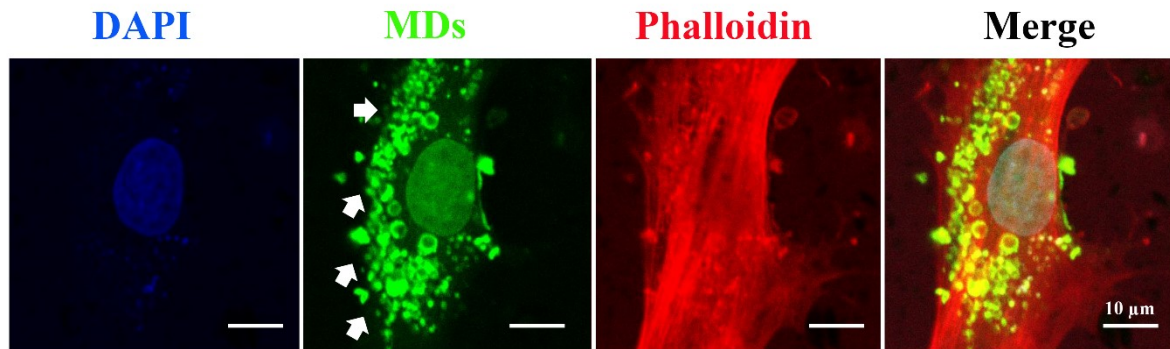


Supplementary Information

Development of bioactive and ultrasound-responsive microdroplets for preventing ovariectomy (OVX)-induced osteoporosis

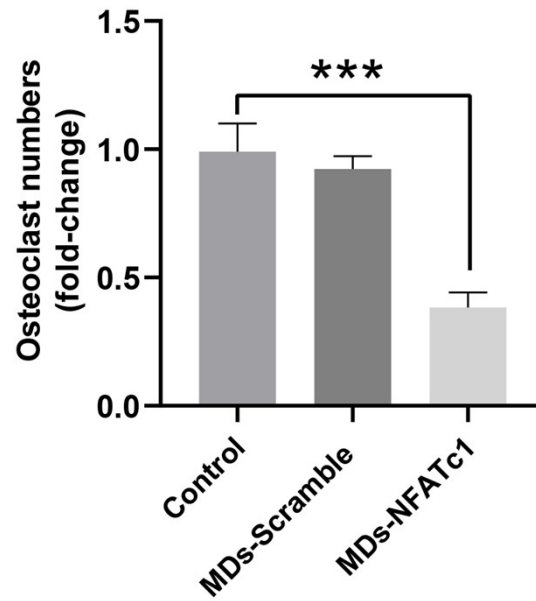
Yi Zhang^{1#}, Yi Dang², Yaping Ma², Dingmei Zhang^{2,5}, Xin Wang^{1,2,3,4*}

Supplementary Figure 1



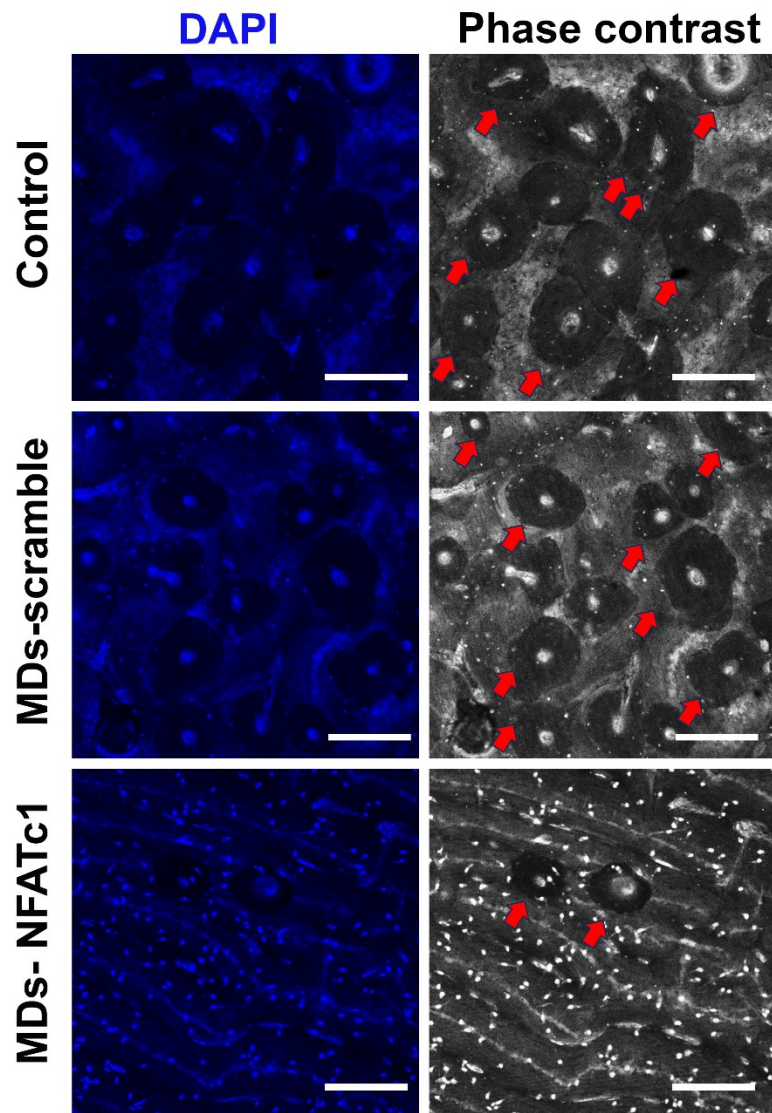
Supplementary Figure 1. Internalization of MDs into hBMSCs. Representative confocal laser scanning microscopy image demonstrate the uptake of FITC-MDs by hBMSCs. Cell cytoskeletons were shown in red color, while the blue channel indicates the nuclear staining. The FITC-MDs-NFATc1 is denoted by the white arrow. Scale bar = 10 μm.

Supplementary Figure2



Supplementary Figure 2. Quantification of TRAP-positive osteoclasts. Significant differences between the treated and non-treated control groups are indicated with ***($p < 0.001$).

Supplementary Figure3



Supplementary Figure 3. *In vitro* osteoclastic bone resorption. The osteoclast precursor cells were cultured on bone discs with varying MDs formulations for 7 days. Following fixation, the samples were subjected to DAPI staining and examination using confocal microscopy. The red arrows indicate the bone resorption pit. The scale bar represents 50 μm .