

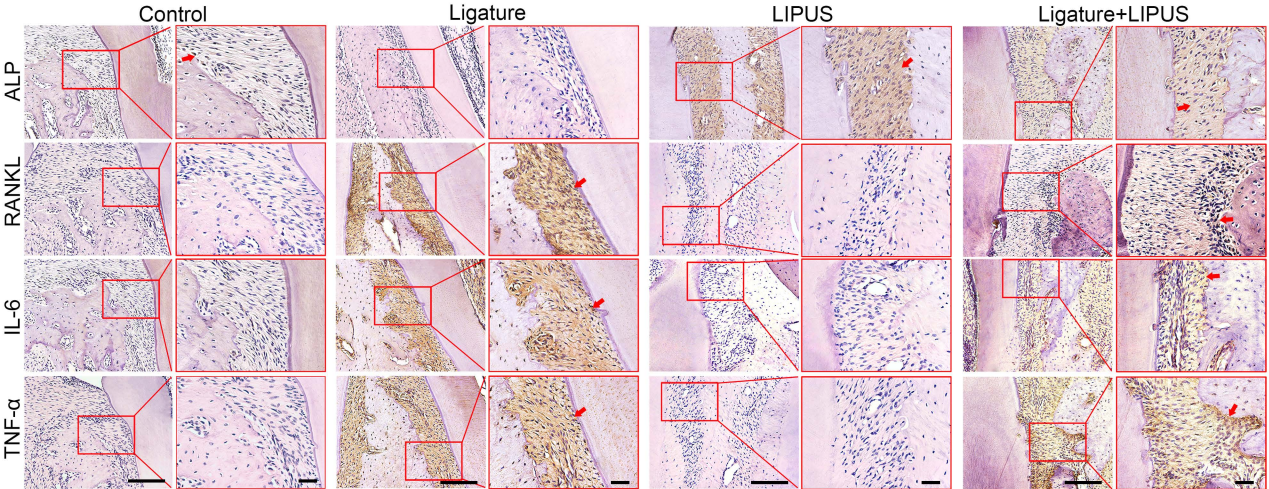
Supplementary Material

Supplementary figures.

Supplementary Figure 1. Immunohistochemical staining of ALP, RANKL, IL-6, TNF- α at 200 \times and 400 \times magnification in rats (Scale bar = 100 μ m). Red arrows indicate positive staining.

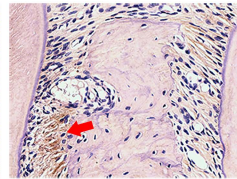
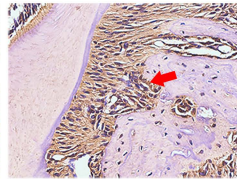
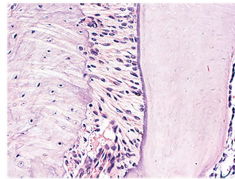
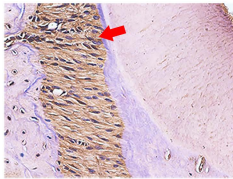
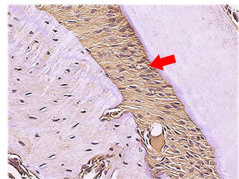
Supplementary Figure 2. Immunohistochemical staining of ALP, RANKL, IL-6, TNF- α at 400 \times magnification in periodontal tissue (Scale bar = 100 μ m). (B) MPO flow analysis. Red arrows indicate positive staining.

Supplementary Figure 3. The semi-quantitative analysis of osteogenic (A), oxidative stress (B) and osteoclastogenic (C) markers by immunohistochemical staining in rats. (D) Osteoclasts number by TRAP staining in rats. Control (no treatment), Ligature (ligature-induced experimental periodontitis), LIPUS (only LIPUS treatment), and Ligature + LIPUS (experimental periodontitis before LIPUS treatment). The semi-quantitative analysis of osteogenic (E), oxidative stress (F) and osteoclastogenic (G) markers by immunohistochemical staining in mice. (H) Osteoclasts number by TRAP staining in mice. Nrf2^{+/+} (WT with no treatment), Nrf2^{-/-} Control (Nrf2^{-/-} with no treatment), Nrf2^{-/-} Ligature (Nrf2^{-/-} with ligature-induced experimental periodontitis), Nrf2^{-/-} LIPUS (Nrf2^{-/-} with LIPUS treatment only), Nrf2^{-/-} Ligature + LIPUS (Nrf2^{-/-} with experimental periodontitis and LIPUS treatment). Data are presented as the mean \pm SEM (n = 3). *, $p < 0.05$; **, $p < 0.005$; ***, $p < 0.0005$; ****, $p < 0.00005$.

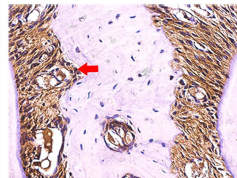
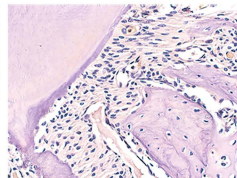
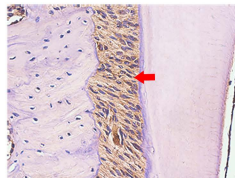
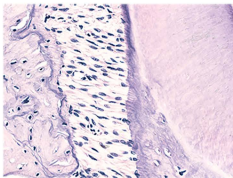
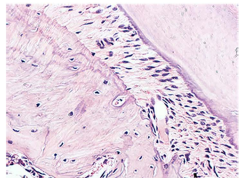


Nrf2^{+/+}Nrf2^{-/-}Nrf2^{-/-} LigatureNrf2^{-/-} LIPUSNrf2^{-/-} Ligature+LIPUS

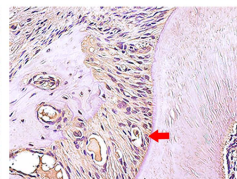
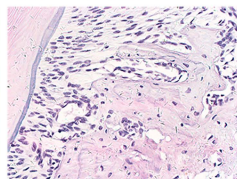
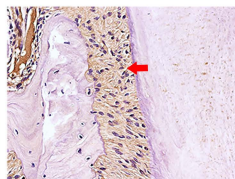
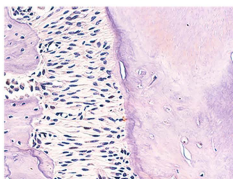
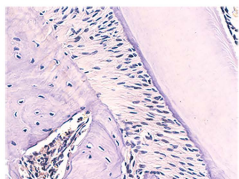
ALP



RANKL



IL-6

TNF- α 