Supplement figure legends

Supplement figure 1. Schematic view of the region of interest (ROI) for the quantitative histomorphometric analysis. Histomorphometric analyses were performed within a rectangular area located at the interproximal alveolar bone between the first mandibular molar (M1) and the second mandibular molar (M2). The ROI boundaries are: coronally: a longitudinal line projected through the cementoenamel junction (CEJ) of M1 and M2; distally: a longitudinal line at the level of the apex of the roots of these molars; and mesially and distally: the distal root surface of M1 and the mesial root surface of M2, respectively.

Supplement figure 2. Body weight (BW) of male and female rice rats during the 18 wk study. Rice rats were fed a high sucrose and casein (H-SC) diet and simultaneously treated with vehicle, alendronate (ALN), or a low dose (LD) or high dose (HD) of zoledronic acid (ZOL). Rats from all groups consistently grew and increased BW from weaning (4 wks of age) to the end of the 18 wks study (22 wks of age). Males became progressively larger in size and heavier than females after 7 wks of age. No significant differences in BW were observed between rats, from the same gender, treated with BPs compared to age-matched vehicle-treated controls. An asterisk denotes a significant difference between genders for each treatment at each particular time point. ($P < 0.05$).

Supplement figure 3. Alendronate (ALN) and zoledronic acid (ZOL) increase bone mineral content and bone mineral density at the distal femoral metaphyses in rice rats of both genders. A pQCT analysis was performed at the distal femoral metaphyses of rice rats

(males and females) treated with vehicle, alendronate (ALN), or a low dose (LD) or high dose (HD) of zoledronic acid (ZOL) for 6-18 wks. Total bone mineral content (BMC) (A, B), total bone mineral density (BMD) (C, D), and bone mineral area (BMA) were determined in males and females, respectively. An asterisk denotes a significant difference from its respective time-matched vehicle-treated control group. ANOVA. $P < 0.05$).