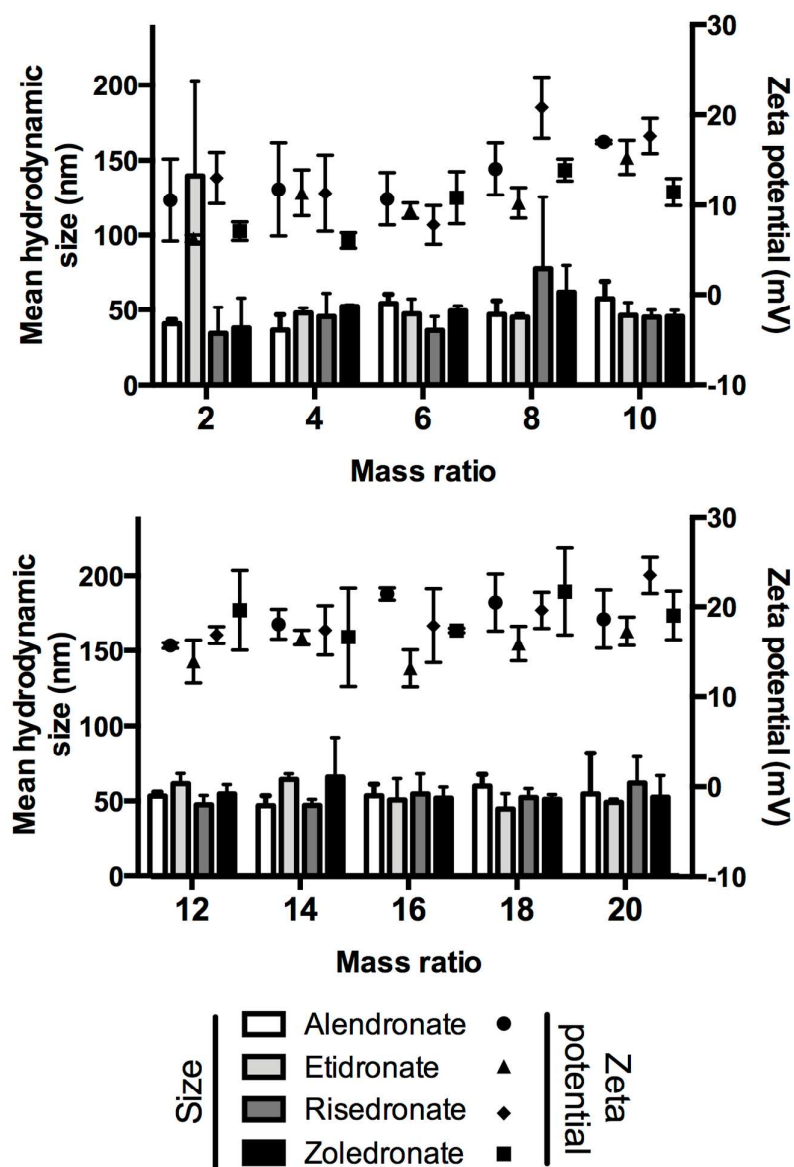
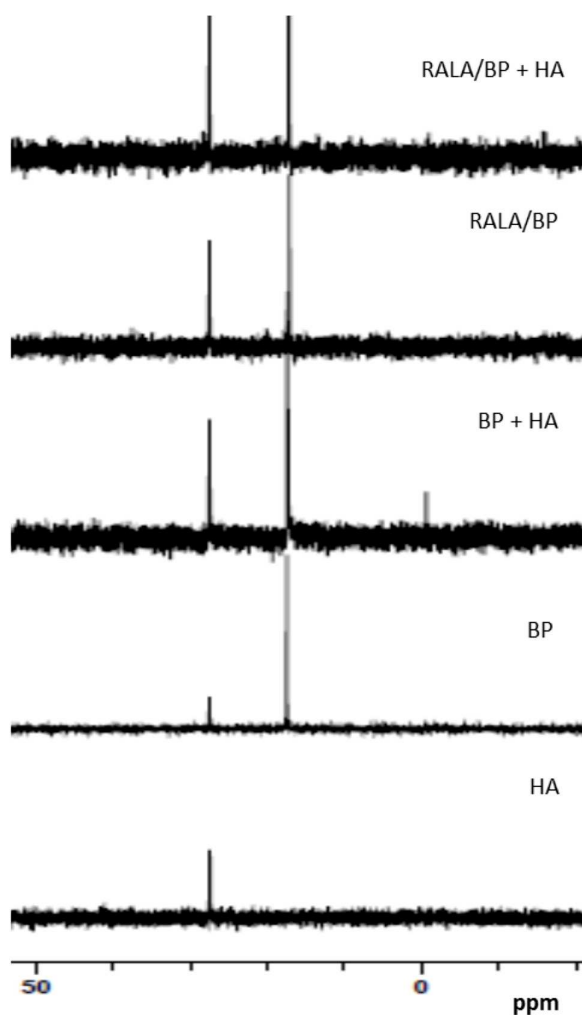


# Supporting information



**Figure S1** – comparison of size and zeta potential of RALA/BP nanoparticles at the molar ratios tested. The similarities between the various BPs in terms of particle size at molar ratio 10, plus the low degree of error observed with respect to zeta potential at the same led us to utilize molar ratio 10 particles in *in vitro* and *in vivo* studies.



**Figure S2** – $^{31}\text{P}$  NMR analysis of alendronate and RALA/alendronate mixed with 0.1 mg/ml hydroxyapatite (HA). The  $^{31}\text{P}$  NMR spectrum for RALA/alendronate mixed with HA produced a spectrum similar to that produced with RALA/alendronate alone, while a second peak was evident on the spectrum when  $^{31}\text{P}$  NMR was used similarly for free alendronate mixed with HA. This indicates an interaction between free alendronate and HA that was not evident when alendronate was complexed with RALA. Evident in the HA spectrum is the peak produced by internal standard trimethyl phosphate (1.0 mM).