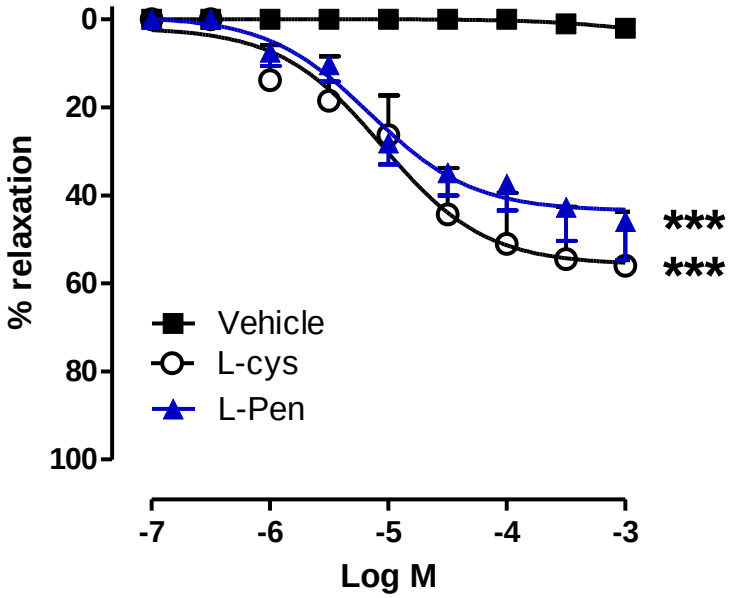
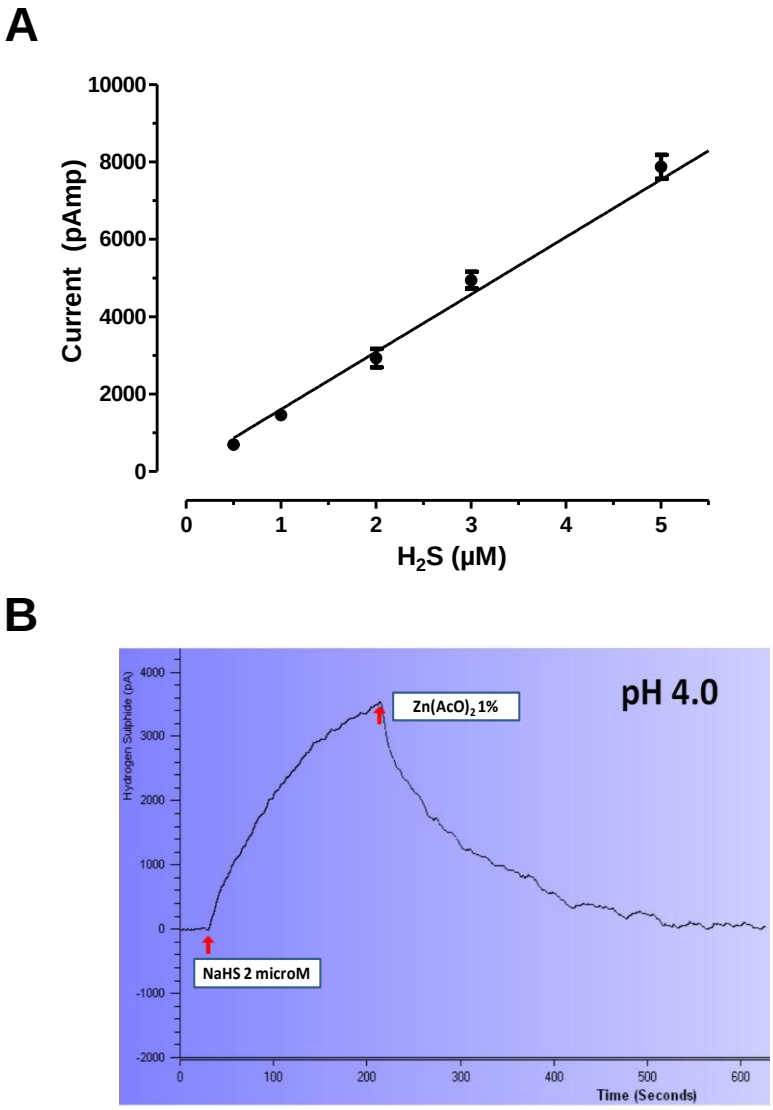
Supplemental material for online publication only

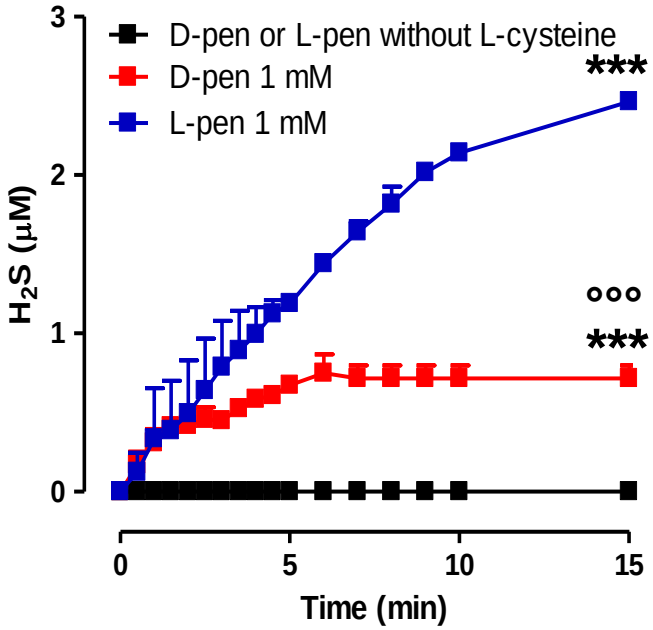


Supplemental figure 1
Concentration-response curves for L-Pen, L-cysteine (L-cys) and the vehicle in aorta rings contracted with phenylephrine (1uM, n=6). * indicate significant differences ($P<0.05$) for comparisons with vehicle.



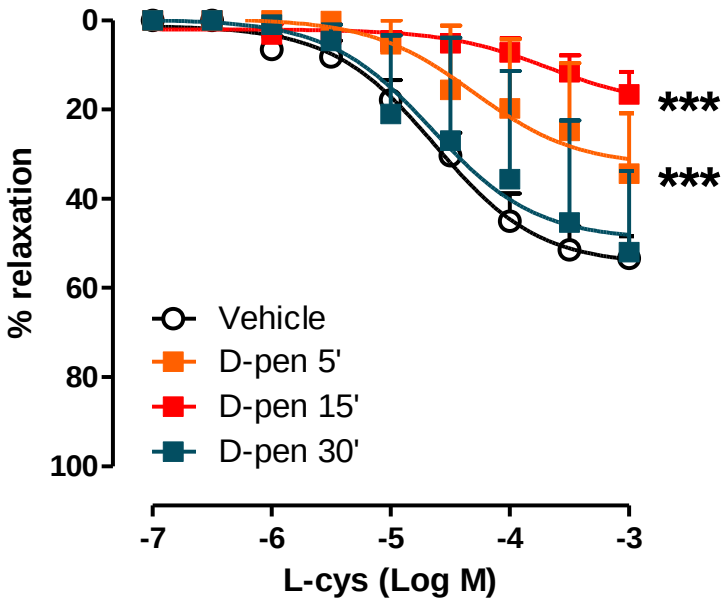
Supplemental figure 2

(A) Calibration curve for H_2S non-enzymatic release measured as known concentration of H_2S vs current measured in pAmps (pH 4) (r^2=0.966). Data are expressed as mean±SEM. (B) Representative graph showing increase in current (pAmps) induced by H_2S release vs time (pH 4). In addition, the effect of zinc acetate [1% w/v $Zn(AcO)_2$] addition on H_2S non-enzymatic release is also displayed. The graph shows that H_2S-induced current decreased as soon as $Zn(AcO)_2$ was added to the reaction mixture.



Supplemental figure 3

Amperometric measurement vs time of cell free H_2S release by D-pen (1 mM) or L-pen (1 mM) in aqueous buffer vehicle (n=6). The assay has been run in presence of L-cysteine, used as nucleophilic agent. ° indicates significant difference ($P<0.05$) for comparisons with L-pen. * indicates significant difference ($P<0.05$) for comparisons with assay run in absence of L-cysteine.



Supplemental figure 4
Effect of D-pen 100µM on L-cys induced vasodilation in isolated aorta rings at different time of incubation (5, 15, 30 min). D-pen was already effective after 5 min pre-incubation, however maximum effect was achieved after 15 min. Pre-incubation for 30 min did not result in any significant effect on L-cys-induced vasodilation. * indicates significant difference ($P<0.05$) for comparison with vehicle.