



**Fig.2 Supp: Correlation between metabolite amplitude and Mn concentration.**

Metabolite amplitude (Glu, PE, GABA and PC) are expressed as a function of Mn concentration ( $\mu\text{M}$ ) estimated by MRI. Each point corresponds to one sub-region ie: DH, IH, VH in both ipsi- and contralateral side (6 points) for each dose used in this study, ie : high and low (12 points). The coordinates in the graph are the mean metabolite amplitude across the giving hippocampus sub-region and the mean Mn concentration determined from the  $T_1$  map. Amplitude and Mn concentration are well correlated: Glu ( $R^2= 0.8$ ;  $p=0.02$ ), PE ( $R^2=0.9$ ;  $p=0.0004$ ), GABA ( $R^2= 0.7$ ;  $p=0.005$ ) and PC ( $R^2= 0.6$ ;  $p=0.04$ ).