

S6 Table The corresponding normalized peak area of metabolites in the hippocampus of mice identified by GS-TOF-MS.

Metabolite	WT control ( $\times 10^{-6}$ )	APP/PS1 TG ( $\times 10^{-6}$ )	30 mg/kg TSA ( $\times 10^{-6}$ )	60 mg/kg TSA ( $\times 10^{-6}$ )
sorbitol	341.06 $\pm$ 52.25#	136.86 $\pm$ 57.43	479.72 $\pm$ 57.77##	361.41 $\pm$ 62.13#
cholecalciferol	609.46 $\pm$ 306.60#	1436.96 $\pm$ 118.92	690.61 $\pm$ 169.86##	685.14 $\pm$ 362.19
ascorbate	290.78 $\pm$ 32.10	103.46 $\pm$ 79.26	337.35 $\pm$ 139.07	469.49 $\pm$ 93.58#
glucose-6-phosphate	247.88 $\pm$ 123.94	99.95 $\pm$ 26.75	364.99 $\pm$ 36.74##	331.40 $\pm$ 209.05
galactose	27941.38 $\pm$ 5910.77	34871.40 $\pm$ 6038.52	12007.54 $\pm$ 2433.38##	16077.82 $\pm$ 3175.81#
sucrose-6-phosphate	80.70 $\pm$ 39.70	64.53 $\pm$ 30.66	179.02 $\pm$ 11.44##	128.16 $\pm$ 17.58

Note: Values are in the mean $\pm$ SEM,  $n=20$ . # $p<0.05$ , ## $p<0.01$  vs APP/PS1 transgenic group.