An HDAC-dependent epigenetic mechanism that enhances the efficacy of the antidepressant drug fluoxetine

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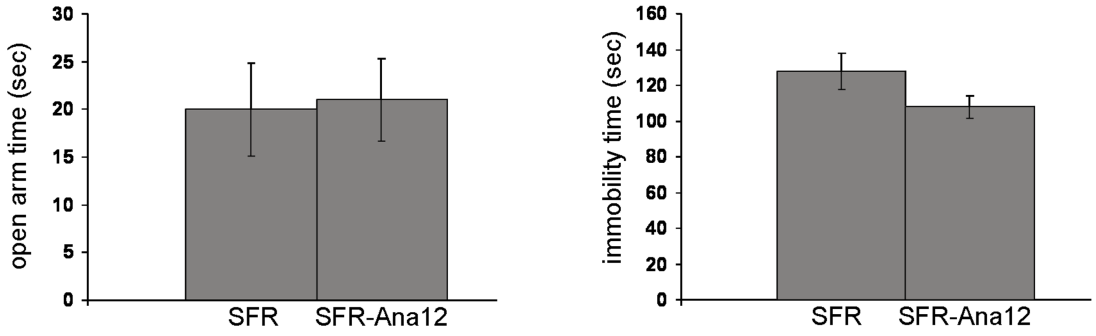
SUPPLEMENTARY MATERIAL

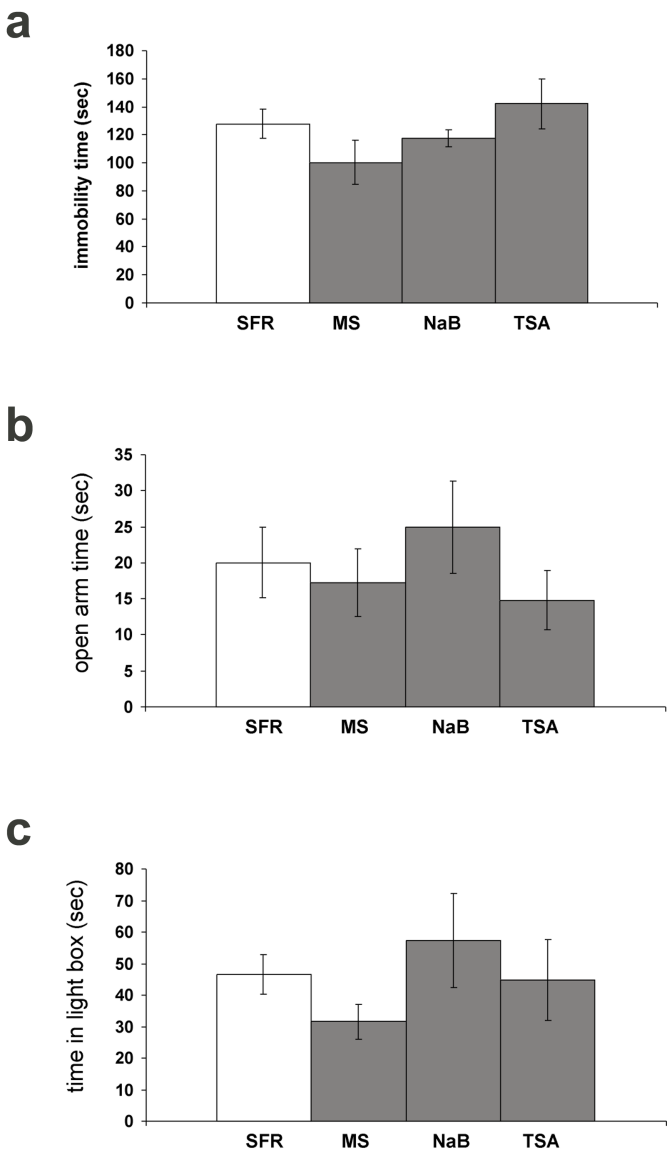
Supplementary Fig. 1 ***The effects of adolescent Ana-12 treatment on the emotional behavior of SFR mice.***

Supplementary Fig. 2. ***The effects of HDAC inhibitors alone on the emotional behavior of SFR mice.***

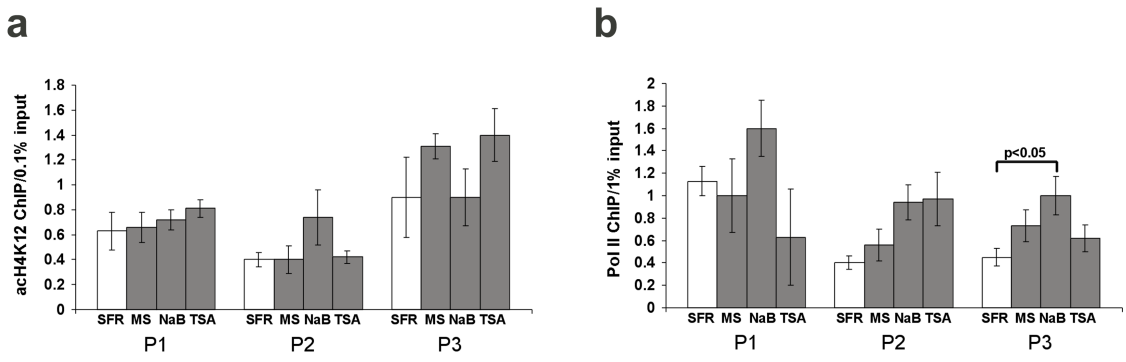
Supplementary Fig. 3. ***The effects of HDAC inhibitors alone on acH4K12 and Pol II enrichment at Bdnf promoters 1 to 3.***



Supplementary Fig. 1. ***The effects of adolescent Ana-12 treatment on the emotional behavior of SFR mice.*** SFR mice treated during adolescence with Ana-12 exhibited unaltered behavior in the EPM (left) and a moderate decrease in immobility in the FST (right) that did not reach significance compared with non-treated SFR mice ($p=0.06$; Student's *t* test). Data are mean ± sem of 9 animals/group (5 males and 4 females).



Supplementary Fig. 2. ***The effects of HDAC inhibitors alone on the emotional behavior of SFR mice.*** SFR mice treated during adolescence only with HDAC inhibitors exhibited unaltered behavior in (**a**) the FST (ANOVA, $F_{(3,26)}=1.704$, $p=0.19$)), (**b**) the EPM (ANOVA $F_{(3,30)}=0.5224$, $p=0.67$) and (**c**), the Light/Dark exploration (ANOVA, $F_{(3,25)}=1.41$, $p=0.266$). Data are mean ± sem of 6 to 8 animals/group (equal number of males and females).



Supplementary Fig. 3. ***The effects of HDAC inhibitors alone on acH4K12 and Pol II enrichment at Bdnf promoters 1 to 3.*** **(a)** In SFR mice treated during adolescence only with HDAC inhibitors, neither HDAC inhibitor alone significantly increased acH4K12 levels at Bdnf promoters 1 to 3 (ANOVA, P1: $F_{(3,22)}=0.6018$, p=0.6; P2: $F_{(3,20)}=3.65$, p=0.04; P3: $F_{(3,20)}=0.42$, p=0.74)). **(b)** Pol II densities at Bdnf promotor 1 did not significantly differ (ANOVA, P1: $F_{(3,20)}=0.7132$, p=0.6) and, although HDAC inhibitor-treated SFR mice exhibited higher levels of Pol II at Bdnf promoter 2, these differences did not reach significance (ANOVA, P2: $F_{(3,20)}=3.06$, p=0.06)). HDAC inhibitor-treated SFR mice also exhibited higher levels of Pol II at Bdnf promoter 3 (ANOVA, P3: $F_{(3,20)}=4.84$, p=0.014)), but significantly higher levels of Pol II were only detected in NaB-treated mice.