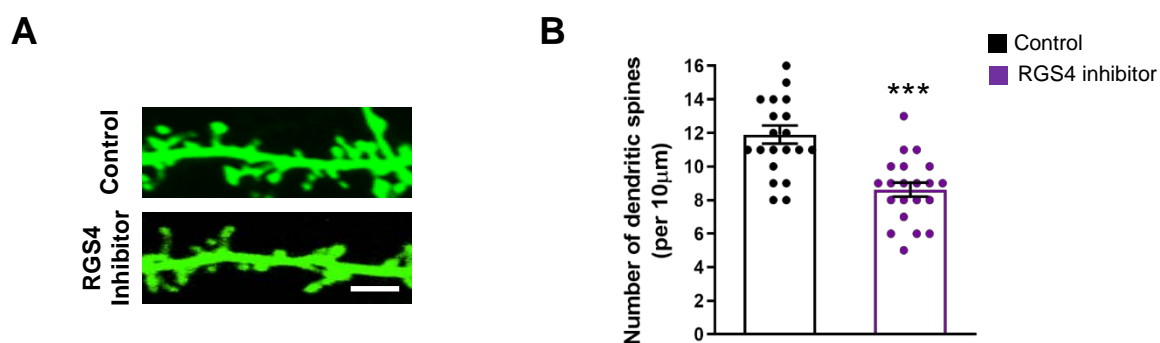


**Fig. S1. BPA affects dendritic spine and synaptic formation in cultured hippocampal neurons**

**A** BPA modifies dendrites spine density in cultured hippocampal neurons. Cultured hippocampal neurons were isolated from E15 embryos, cultured, and transfected with a GFP plasmid at DIV 10. After 4 days, neurons were treated with 100  $\mu$ M BPA for 24 h. Scale bar, 5  $\mu$ m. **B** Quantification of the number of dendritic spines in each condition.  $n=20$  neurons from 3 independent cultures using 3 mice for each condition. Statistical significance was determined by one-way ANOVA with Bonferroni correction test. Data are shown as relative changes versus controls.  $***p < 0.001$ . **C** Cultured hippocampal neurons from E15 mice were cultured for 10 days and transfected with a GFP plasmid. After 4 days, neurons were treated with 100  $\mu$ M BPA for 24 h. Excitatory synapses were assessed by immunostaining using a VGLUT antibody. Scale bar, 5  $\mu$ m. **D** Quantification of the number of excitatory synapses shown in a.  $n=30$  neurons from 3 independent cultures using 3 mice for each condition. Statistical significance was determined by one-way ANOVA with Bonferroni correction test. Data are shown as relative changes versus controls.  $***p < 0.001$ . **E** BPA induces no changes in the number of inhibitory synapses in cultured hippocampal neurons. Inhibitory synapses were assessed by immunostaining using a VGAT antibody. Scale bar, 5  $\mu$ m. **F** Quantification of inhibitory synapse numbers shown in c.  $n=30$  neurons from 3 independent cultures using 3 mice for each condition. Statistical significance was determined by one-way ANOVA with Bonferroni correction test. Data are shown as relative changes versus controls.



**Fig. S2. CCG50014 (RGS4 inhibitor) affects dendritic spine and synaptic formation in cultured cortical neurons**

**A** CCG50014 modifies dendrites spine density in cultured cortical neurons. Cultured cortical neurons were isolated from E15 embryos, cultured, and transfected with a GFP plasmid at DIV 10. After 4 days, neurons were treated with 10  $\mu$ M CCG50014 for 24 h. Scale bar, 5  $\mu$ m. **B** Quantification of the number of dendritic spines in each condition.  $n=20$  neurons from 3 independent cultures using 3 mice. Statistical significance was determined by one-way ANOVA with Bonferroni correction test. Data are shown as relative changes versus controls. \*\*\* $p < 0.001$ .