scientific reports

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Author Correction: Strictly regulated agonist-dependent activation of AMPA-R is the key characteristic of TAK-653 for robust synaptic responses and cognitive improvement

Published online: 21 July 2021

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Correction to: *Scientific Reports* https://doi.org/10.1038/s41598-021-93888-0, published online 15 July 2021

The original version of this Article contained an error in Figures 3 and 5 where the y-axis did not display correctly in panel B. The original Figures 3 and 5 and their accompanying legends appear below.

The original Article has been corrected.

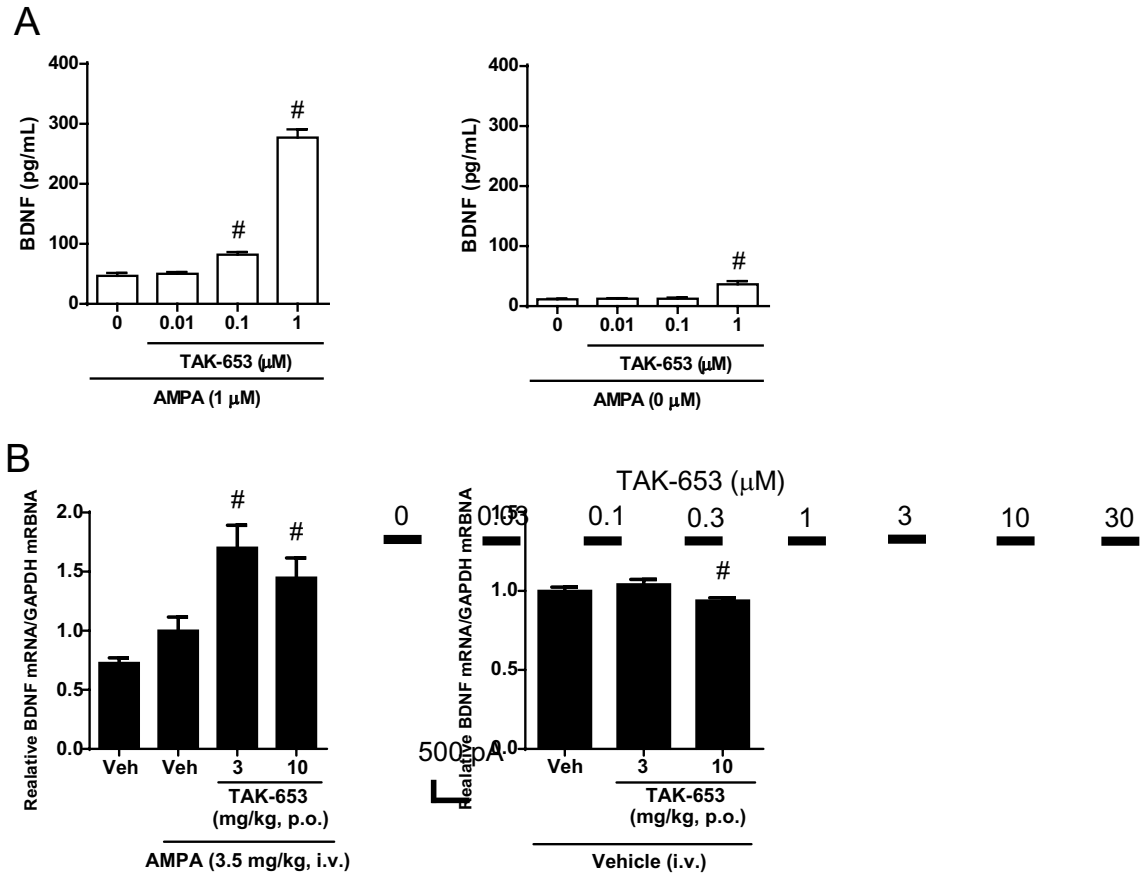

Figure 3. Effects of TAK-653 on BDNF expression in vitro and in vivo. (**A**) Effects of TAK-653 on BDNF protein levels in rat primary hippocampal neurons. Cells were treated with AMPA (0 or 1 μM) and TAK-653 (0.01, 0.1, 1 μM) for 24 h and then were collected using lysis buffer. Cells in control group were treated with 1 μM AMPA and DMSO. Values were expressed as pg per mL. Data are represented as mean ± SD (n = 3). Statistical significance was determined by a two-tailed Williams' test with significance set at $^{\#}P \leq 0.05$ (versus control group; two-tailed Williams' test). (**B**) Effects of TAK-653 on BDNF mRNA in hippocampus in AMPA (3.5 mg/kg, i.v.)-treated mice. TAK-653 (3 and 10 mg/kg, p.o.) was administered to mice 1 h before the administration of AMPA (3.5 mg/kg, i.v.) (left) or vehicle (right). Tissues were isolated 3 h after AMPA administration. Data were presented as the mean ± SEM (n = 23–24). $^{\#}P \leq 0.05$ (versus vehicle-treated group; two-tailed Williams' test).

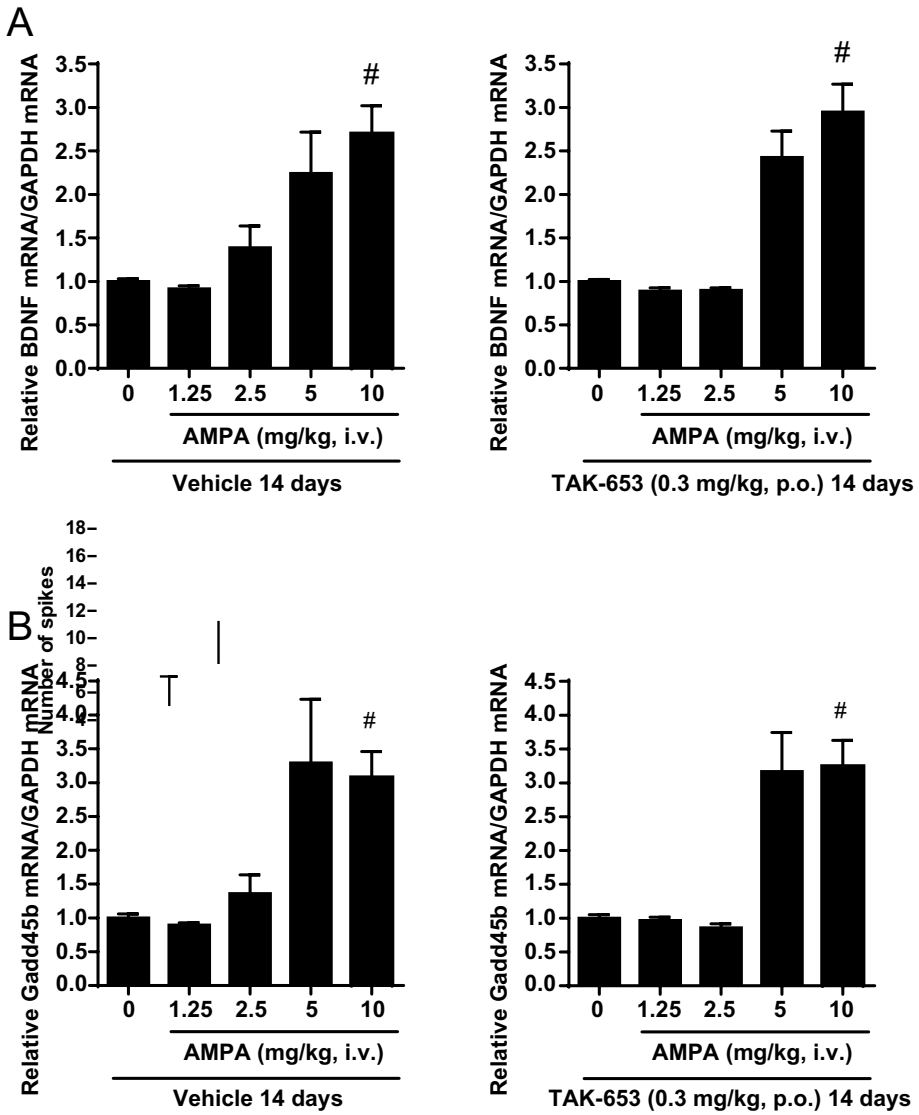

Figure 5. Effects of repeated treatment of TAK-653 on AMPA-induced BDNF (**A**) or Gadd45b (**B**) mRNA expression in mouse hippocampus. Vehicle or TAK-653 (0.3 mg/kg, p.o.) for 14 days were administered to mice. On the day 14, vehicle or AMPA (1.25, 2.5, 5 or 10 mg/kg, i.v.) was administered 1 h after vehicle (left) or TAK-653 (right). Tissues were isolated 3 h after AMPA administration. Data were presented as the mean ± SEM (n = 23–24). $^{\#}P \leq 0.05$ (versus vehicle-treated group; two-tailed Shirley–Williams test).