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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

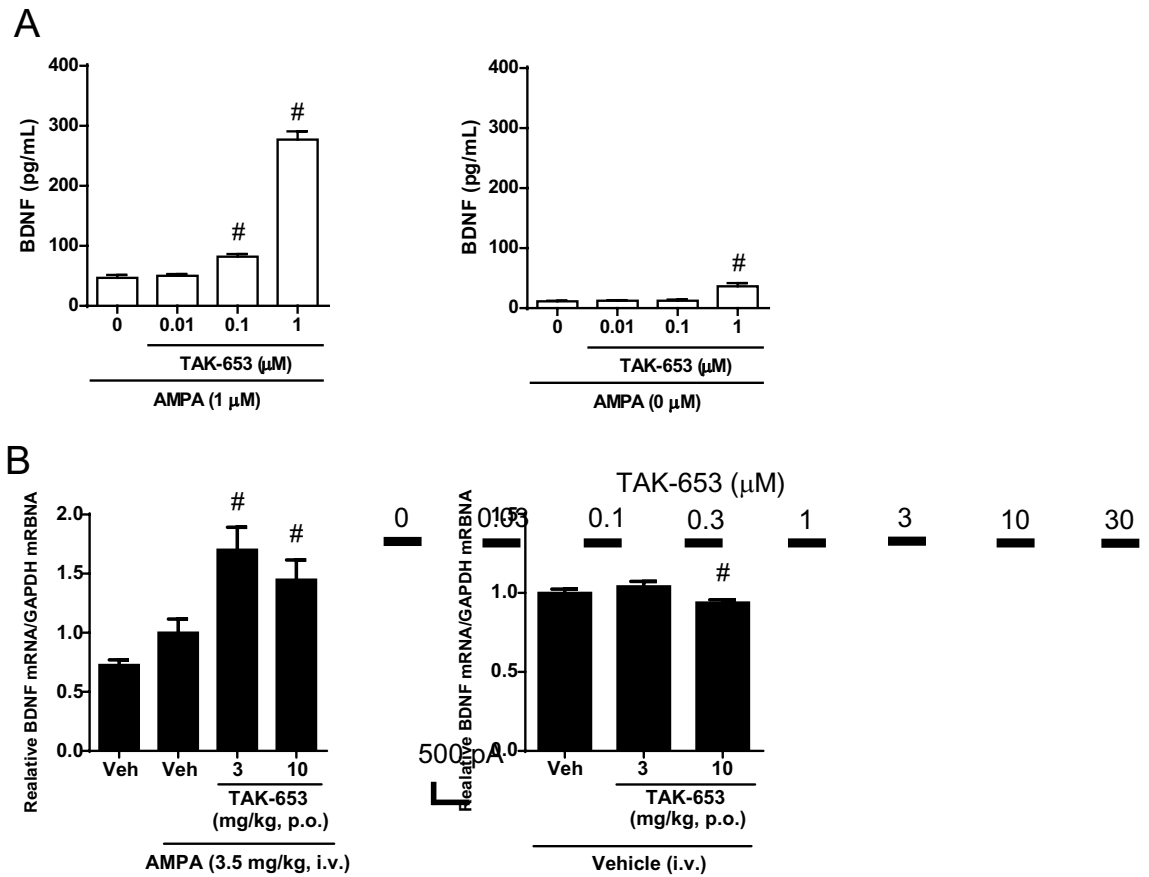
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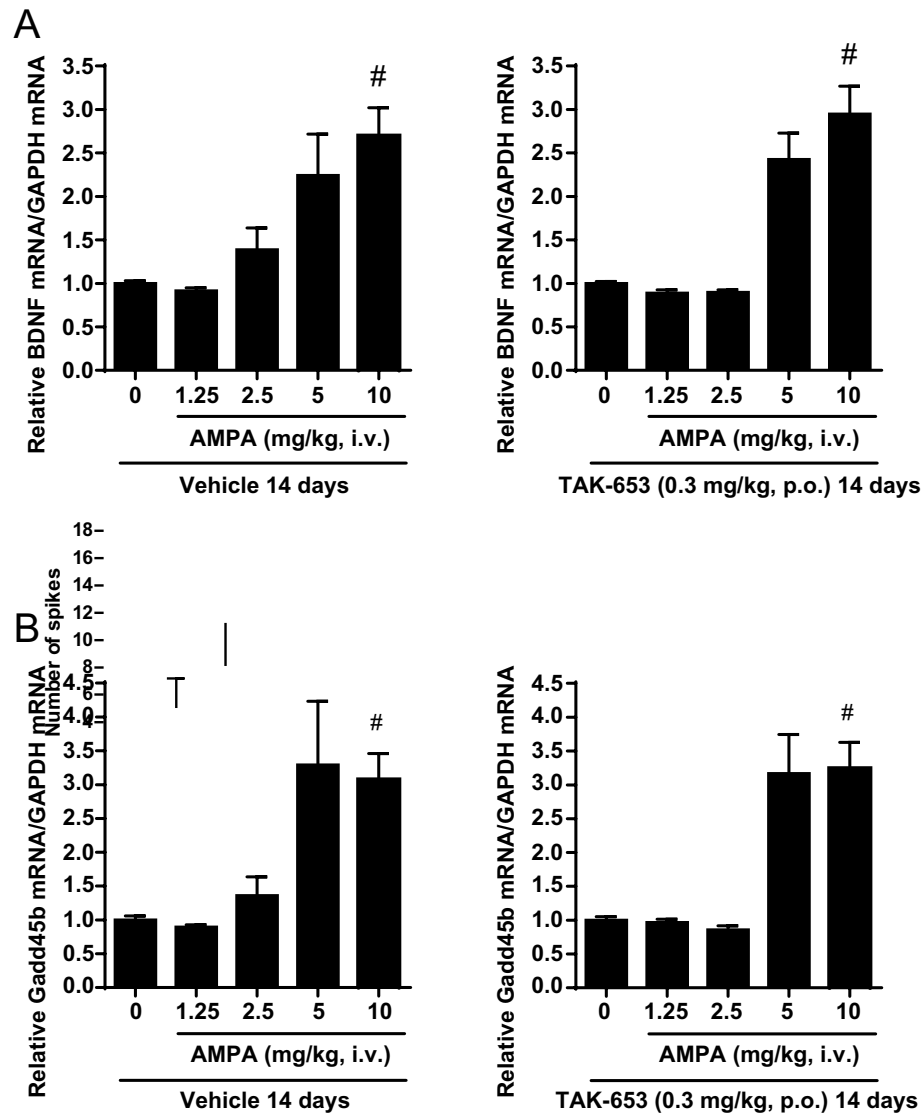
The original version of this Article contained an error in Figures 3 and 5 where the y-axis did not display correctly in panel B. The original Figures 3 and 5 and their accompanying legends appear below.

The original Article has been corrected.

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**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  $\pm$  SEM ( $n = 23\text{--}24$ ). <sup>#</sup> $P < 0.05$  (versus vehicle-treated group; two-tailed Shirley-Williams test).



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