

Supplementary Materials: Berberine Alleviates Olanzapine-Induced Adipogenesis via the AMPK α –SREBP Pathway in 3T3-L1 Cells

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1. Effects of Treatment with OLZ on 3T3-L1 Differentiation

To detect whether OLZ could enhance adipogenesis, 3T3-L1 cells were exposed to OLZ (0, 1, 10, 50 μ M) for the first six days of differentiation (Day 0–6). On day 12, cells were stained with ORO (Figure S1A). Results of the microscopic imaging and degree of TG suggested that a concentration of 10 μ M OLZ could greatest extent augment adipogenesis compared with vehicle control (* $p < 0.05$), but not 50 μ M OLZ. 1 μ M Ros which is a potent PPAR γ agonist significantly increased lipogenesis and enhanced about 2-fold TG accumulation (** $p < 0.01$) (Figure S1B).

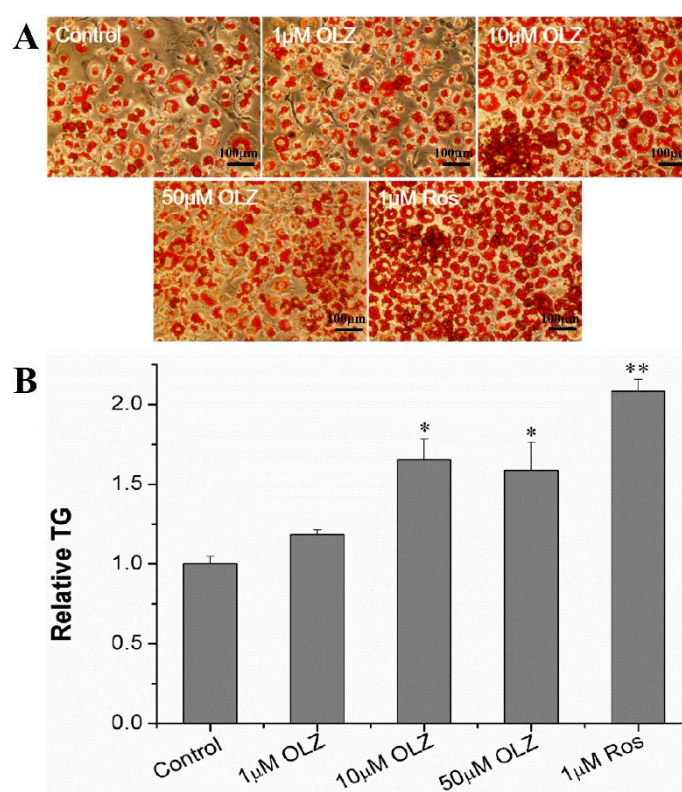


Figure S1. The effect of OLZ on 3T3-L1 differentiation. (A) Morphological change and oil droplet accumulation of 3T3-L1 cells differentiation treated with OLZ (0, 1, 10, 50 μ M); (B) the determination of TG in 3T3-L1 cells treated with OLZ on day 12. Treated with DMSO as vehicle control. Treatment 1 μ M Ros as positive control group. The values given are the mean \pm SEM ($n = 3$). (* $p < 0.05$ vs. vehicle control, ** $p < 0.01$ vs. vehicle control). Scale bars, 100 μ m.

2. Effects of Treatment with BBR on 3T3-L1 Differentiation

To investigate the inhibitory effect of BBR on lipogenesis, various concentration BBR (0, 0.675, 1.25, 2.5, and 5 μ M) were loaded to 3T3-L1 cells culture for 6 days. As shown in Figure S2A, the inhibitory effect of BBR on lipogenesis of 3T3-L1 cells was dose-dependent, 5 μ M BBR could clearly reduce the shape of lipid droplets stained with Oil Red O. 5 μ M BBR significantly decrease the degree of TG ($28.95\% \pm 9.2\%$) compared to controls (** $p < 0.01$) (Figure S2B).

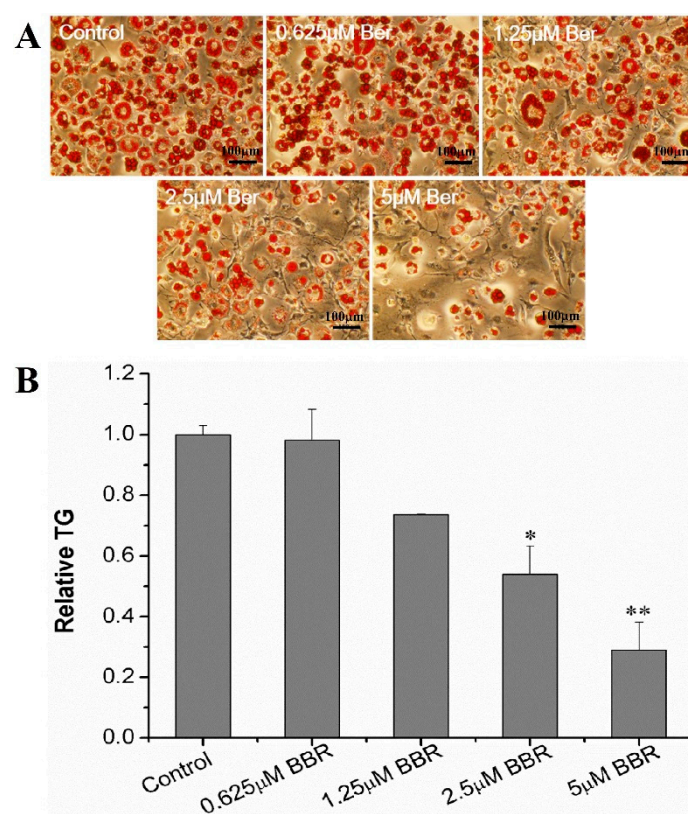


Figure S2. The effect of BBR on 3T3-L1 cells differentiation. **(A)** Cell morphology and **(B)** TG accumulation of 3T3-L1 adipocytes treated with BBR alone on day 12. The concentration of BBR respectively are 0, 0.625, 1.25, 2.5 and 5 μ M. Treatment DMSO as control. Values given are the mean \pm SEM ($n = 3$). (* $p < 0.05$ and ** $p < 0.01$ vs. control). Scale bars, 100 μ m.