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THIOREDOXIN-1 IMPROVES THE COGNITIVE FUNCTION OF APP/PS1 MICE

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Alzheimer's disease (AD) is the most common neurodegenerative disorder which is characterized by impairment of cognitive function. Thioredoxin-1 (Trx-1) is a redox regulating protein, has antioxidant and protecting neuron effects. Our previous study found that Trx-1 improved the cognitive function of Parkinson's disease (PD) mice. However, whether Trx-1 improves the cognitive function of AD is still unknown. In present study, APP/PS1 transgenic mice model were used. Trx-1 overexpressed transgenic mice were hybridizing with APP/PS1 transgenic mice. Our results showed that the escape latency in APP/PS1 transgenic mice was longer when compared with the control group, which was reduced in Trx-1/APP/PS transgenic mice significantly by using the navigational experiments in Morris water maze. In the spatial probe test, the total number of crossings and the percentage of time spent in the target quadrant were decreased in APP/PS1 transgenic mice, which were significantly increased in Trx-1/APP/PS mice. The mRNA levels of APP and PS1 were decreased in Trx-1/APP/PS1 mice when compared to APP/PS1 mice. These results suggest that Trx-1 improves cognitive function of APP/PS1 mice. Trx-1 may be a potential therapeutic target for the clinical management of AD.



Biography

Jie Bai has completed her PhD from Kyoto University and Postdoctoral Studies from Health Center, University of Virginia. She is the Professor of Kunming University of Science and Technology, China. She has published more than 50 papers in reputed journals.

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