Resveratrol ameliorates physical and psychological stress-induced depressive-like behavior

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Introduction

- Depression is a mental disorder characterized by low self-confidence, feelings of hopelessness, worthlessness, insomnia, fatigue, reduced interest in sex and social interactions and the onset of suicidal thoughts [1].
- Stress associated with the Hypothalamic-Pituitary-Adrenal axis abnormalities is known to be one of the predisposing factors for depression [2].
- The currently available psychiatric drugs are only moderately effective, and only some patients respond to existing antidepressants [3]. Besides, it is reported that about 60% of patients experience uncomfortable side effects after taking antidepressants [4].
- Resveratrol is a non-flavonoid polyphenol compound obtained from red grapes that has many benefits like antioxidant and suppressive effects on CRF mRNA induced by physical stress for depression. Besides, it is reported that about 60% of patients experience uncomfortable side effects after taking antidepressants [4].

Objective

This study aimed to determine the effect of resveratrol on psychological stress-induced depressive-like behavior in mice.

Method

- Male ICR mice aged 6–8 weeks
- Physical stress (FS) = electrical footshock
- Psychological stress (PS) = response to physical stress group
- Treatment was conducted with fluvoxamine (Flu) 20 mg/kg and resveratrol (Res) 20, 40, 80 mg/kg for 7 days
- Depressive-like state was evaluated using a tail suspension test (TST) and forced swim test (FST) one day after the last induction
- RT PCR was used to examine mRNA corticotropin-releasing factor (CRF) expression in the amygdala

Conclusion

Resveratrol ameliorates depressive-like behavior induced by physical and psychological stress.

References