Accepted Manuscript

Title: Resveratrol prevents cognitive deficits induced by chronic unpredictable mild stress: Sirt1/miR-134 signalling pathway regulates CREB/BDNF expression in hippocampus in vivo and in vitro

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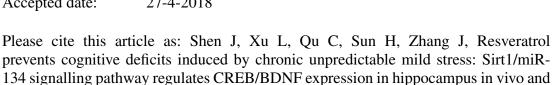
PII: S0166-4328(18)30412-1

DOI: https://doi.org/10.1016/j.bbr.2018.04.050

Reference: BBR 11416

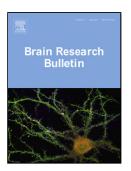
To appear in: Behavioural Brain Research

Received date: 19-3-2018 Revised date: 27-4-2018 Accepted date: 27-4-2018



in vitro, Behavioural Brain Research (2010), https://doi.org/10.1016/j.bbr.2018.04.050

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Resveratrol prevents cognitive deficits induced by chronic unpredictable mild stress:

Sirt1/miR-134 signalling pathway regulates CREB/BDNF expression in hippocampus in vivo

and in vitro

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Highlights

1.Resveratrol prevents cognitive impairment induced by chronic unpredictable mild stress.

2.Resveratrol treatment increases Sirt1, p-CREB, CREB, BDNF expression and decreases miR134 levels

in hippocampus.

3. The effects of resveratrol are mediated by activating Sirt1/miR134 pathway.

Abstract

Chronic unpredictable mild stress (CUMS) leads to neuropsychiatric disorders, such as depression, anxiety and

cognitive impairment. Resveratrol is a natural polyphenol existed in polygonum cuspidatum and has been

demonstrated to be a potent activator of Sirtuin 1 (Sirt1). Previous studies reported that resveratrol treatment

ameliorated CUMS-induced depressive-like behavior and cognitive deficits through upregulating cAMP response

element-binding protein (CREB) and brain derived neurotrophic factor (BDNF) expression. However, the upstream

signalling pathway mediating CREB/BDNF expression and then exerting a protective role on cognitive function

remains unclear. The present study aims to investigate the possible mechanism of resveratrol on CUMS-induced

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