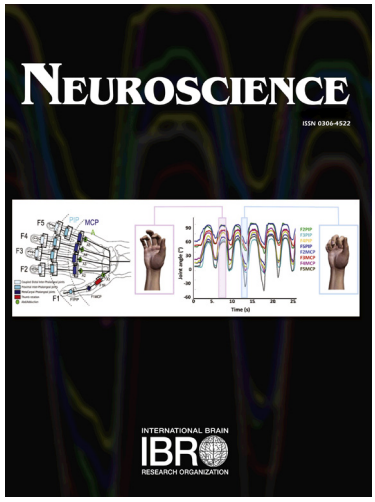

Research Article

Curcumin protects against chronic stress-induced dysregulation of neuroplasticity and depression-like behaviors via suppressing IL-1β pathway in rats

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Curcumin protects against chronic stress-induced dysregulation of neuroplasticity and depression-like behaviors via suppressing IL-1β pathway in rats

Cuiqin Fan[1], Qiqi Song[1], Peng Wang[1], Ye Li[1], Mu Yang[1], Boce Liu[1], Shu Yan Yu[1, 2] *

1. Department of Physiology, Shandong University, School of Basic Medical Sciences, Wenhuaxilu Road, Jinan, Shandong Province, 250012, PR China;

2. Shandong Provincial Key Laboratory of Mental Disorders, School of Medicine, Wenhuaxilu Road, Jinan, Shandong Province, 250012, PR China;

* Corresponding author: Shu Yan Yu,

E-mail address: shuyanyu@sdu.edu.cn

Tel: +86-0531-88383902; fax: +86-0531-88382502

Abstract -Accumulating evidence has accrued demonstrating that inflammatory processes in the central nervous system (CNS) are associated with various neurological disorders including depression. However, whether inflammation-mediated neuronal damage is involved in depression-like behaviors induced by chronic stress and, in particular, whether suppression of inflammation could then serve as a potential strategy in depression therapy remains largely unknown. The present study aimed to investigate the neuronal mechanisms and signaling pathways through which inflammation results in neuronal deterioration in a rat model of depression and thus identify agents with potential roles as antidepressant treatments. Our results showed that chronic unpredictable mild stress (CUMS) exposure induced microglia more pro-inflammatory and overexpression of the cytokines interleukin-1β (IL-1β),