



Correction to: Exosomes derived from microRNA-138-5poverexpressing bone marrow-derived mesenchymal stem cells confer neuroprotection to astrocytes following ischemic stroke via inhibition of LCN2

Yiming Deng^{1,2,3†}, Duanduan Chen^{4†}, Feng Gao^{1,2,3}, Hong Lv⁵, Guojun Zhang⁵, Xuan Sun^{1,2,3}, Lian Liu^{1,2,3}, Dapeng Mo^{1,2,3}, Ning Ma^{1,2,3}, Ligang Song^{1,2,3}, Xiaochuan Huo^{1,2,3}, Tianyi Yan⁴, Jingbo Zhang^{1,2,3*} and Zhongrong Miao^{1,2,3*}

Correction to: J Biol Eng 13, 71 (2019)

<https://doi.org/10.1186/s13036-019-0193-0>

Figure 8 of the original article [1] unfortunately contained an error: Image 8b that was used as a template during the preparation of the manuscript, was accidentally left in the final version of the article that went on to publish online.

The correct image presenting the TUNEL staining to detect neuron apoptosis and to facilitate quantitative analysis for the apoptotic rate, is included in Fig. 8 below as well as the original article which has now been revised.

The original article can be found online at <https://doi.org/10.1186/s13036-019-0193-0>.

* Correspondence: zhangjinbo_zjb@126.com; zhongrongm@126.com

†Yiming Deng and Duanduan Chen contributed equally to this work.

¹Department of Interventional Neuroradiology, Beijing Tiantan Hospital, Capital Medical University, No. 6, Tiantan Xili, Fengtai District, Beijing 100050, People's Republic of China

Full list of author information is available at the end of the article



© The Author(s). 2022 **Open Access** This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if changes were made. The images or other third party material in this article are included in the article's Creative Commons licence, unless indicated otherwise in a credit line to the material. If material is not included in the article's Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this licence, visit <http://creativecommons.org/licenses/by/4.0/>. The Creative Commons Public Domain Dedication waiver (<http://creativecommons.org/publicdomain/zero/1.0/>) applies to the data made available in this article, unless otherwise stated in a credit line to the data.

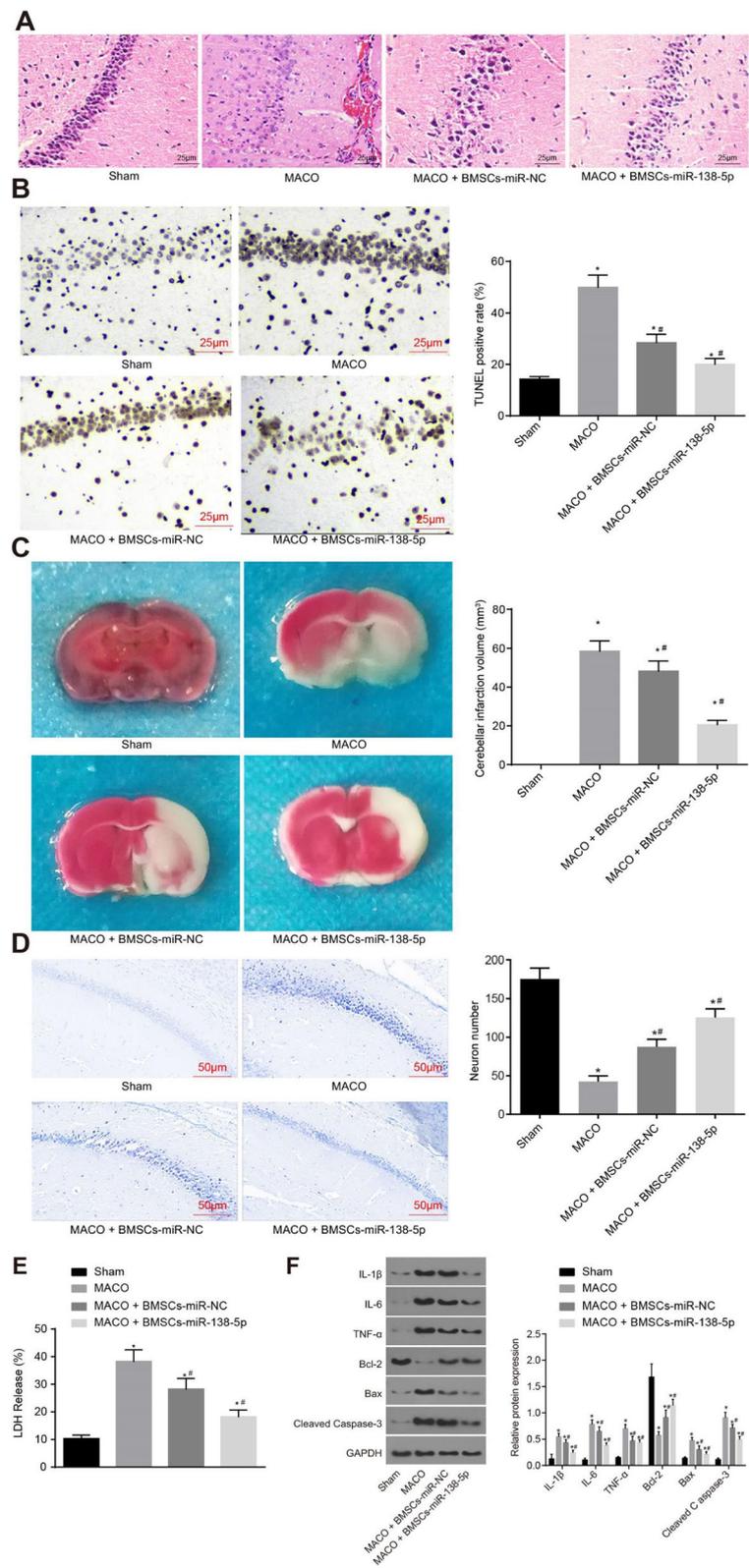


Fig. 8 (See legend on next page.)

(See figure on previous page.)

Fig. 8 BMSCs-derived exosomal miR-138-5p reduces neuron injury following IS in vivo. **a**, HE staining for hippocampal tissues of MCAO mouse models (scale bar = 25 μ m); **b**, TUNEL staining to detect neuron apoptosis (scale bar = 25 μ m) and quantitative analysis for the apoptotic rate; **c**, TTC staining showing the volume changes of cerebral infarction in mice and the corresponding quantitative analysis; **d**, Nissl staining (scale bar = 50 μ m) showing the number of neurons and the corresponding quantitative analysis; **e**, quantitative analysis for LDH content; **f**, protein expression of inflammatory factors, proliferation and apoptosis marker proteins determined by Western blot analysis. The data were all measurement data, expressed as mean \pm standard deviation. The comparison among multiple groups was analyzed by one-way analysis of variance. The experiment was repeated three times. *, $p < 0.05$ vs. sham. #, $p < 0.05$ vs. MCAO. $n = 10$. LDH, lactate dehydrogenase; TUNEL, terminal deoxynucleotidyl transferase-mediated dUTP nick-end labeling; MCAO, middle cerebral artery occlusion; GAPDH, glyceraldehyde-3-phosphate dehydrogenase; Bax, Bcl-2-associated X protein; Bcl-2, B-cell CLL/Lymphoma 2; IL-6, interleukin-6; IL-1 β , interleukin-1 β ; TNF- α , tumor necrosis factor- α ; BMSCs-control, MCAO mice without any treatment; BMSCs-miR-NC, MCAO mice injected with BMSCs-miR-NC exosomes; BMSCs-miR-138-5p, MCAO mice injected with BMSCs-miR-138-5p exosomes

Author details

¹Department of Interventional Neuroradiology, Beijing Tiantan Hospital, Capital Medical University, No. 6, Tiantan Xili, Fengtai District, Beijing 100050, People's Republic of China. ²China National Clinical Research Center for Neurological Diseases, Beijing 100070, People's Republic of China. ³Center of Stroke, Beijing Institute for Brain Disorders, Beijing 100069, China. ⁴School of Life Science, Beijing Institute of Technology, Beijing 100081, China. ⁵Departments of Clinical Laboratory, Beijing Tiantan Hospital, Capital Medical University, Beijing 100050, People's Republic of China.

Published online: 31 March 2022

Reference

1. Deng, et al. Exosomes derived from microRNA-138-5poverexpressing bone marrow-derived mesenchymal stem cells confer neuroprotection to astrocytes following ischemic stroke via inhibition of LCN2. *J Biol Eng.* 2019; 13:71. <https://doi.org/10.1186/s13036-019-0193-0>.