

Regenerative Potential Nanomedicine of Adipocyte Stem Cell-Derived Exosomes in Senescent Skin Tissue [Response to Letter]

An-Na Li^{1,*}, Jing-Hua Sun^{1,2,*}, Syafiqah Saidin^{3,4}, Jee Syuen Cheah^{4,5}, Chia-Hung Kuo⁶, Ling Li¹, Jia-Shen Li¹, Ru-Yu Bai¹, Yong Diao¹, Hui-Min David Wang^{5,7-9}

¹School of Medicine, Huaqiao University, Quanzhou, Fujian, 362021, People's Republic of China; ²Hebei Key Laboratory of Basic Medicine for Diabetes, Shijiazhuang Second Hospital, Shijiazhuang, Hebei, 050000, People's Republic of China; ³IJN-UTM Cardiovascular Engineering Centre, Institute of Human Centered Engineering, Universiti Teknologi Malaysia, Johor Bahru, Johor, 81310, Malaysia; ⁴Department of Biomedical Engineering & Health Sciences, Faculty of Electrical Engineering, Universiti Teknologi Malaysia, Johor Bahru, Johor, 81310, Malaysia; ⁵Graduate Institute of Biomedical Engineering, National Chung Hsing University, Taichung, Taiwan, Republic of China; ⁶Department of Seafood Science, National Kaohsiung University of Science and Technology, Kaohsiung, Taiwan, Republic of China; ⁷Regenerative Medicine and Cell Therapy Research Center; and Graduate Institute of Medicine, College of Medicine, Kaohsiung Medical University, Kaohsiung, Taiwan, Republic of China; ⁸Department of Medical Laboratory Science and Biotechnology, China Medical University, Taichung, Taiwan, Republic of China; ⁹Center of Applied Nanomedicine, National Cheng Kung University, Tainan, Taiwan, Republic of China

*These authors contributed equally to this work

Correspondence: Hui-Min David Wang, Graduate Institute of Biomedical Engineering, National Chung Hsing University, No. 145, Xingda Road, South District, Taichung City, 402, Taiwan, Republic of China, Tel +886 4 22840733 #651; +886 935753718, Email davidw@dragon.nchu.edu.tw; Yong Diao, School of Medicine, Huaqiao University, Quanzhou, Fujian, 362021, People's Republic of China, Email diaoyong@hqu.edu.cn

Dear editor

Thank you for the letter. Firstly, the study tracked skin repair in mice for 30 days to study the long-term efficacy of the exosomes. Secondly, the safety of exosomes has been confirmed and reported in several published articles.¹⁻³ Finally, we are researching the mechanisms by which exosomes improve skin status.

Disclosure

The authors report no conflicts of interest in this communication.

References

1. Figueroa-Valdés AI, Luz-Crawford P, Herrera-Luna Y, et al. Clinical-grade extracellular vesicles derived from umbilical cord mesenchymal stromal cells: preclinical development and first-in-human intra-articular validation as therapeutics for knee osteoarthritis. *J Nanobiotechnology*. 2025;23. doi:10.1186/s12951-024-03088-x
2. Nazari H, Alborzi F, Heirani-Tabasi A, et al. Evaluating the safety and efficacy of mesenchymal stem cell-derived exosomes for treatment of refractory perianal fistula in IBD patients: clinical trial Phase I. *Gastroenterol Rep*. 2022;10:goac075. doi:10.1093/gastro/goac075
3. Chandran NS, Bhupendrabhai MN, Tan TT, et al. A Phase I, open-label study to determine safety and tolerability of the topical application of mesenchymal stem/stromal cell (MSC) exosome ointment to treat psoriasis in healthy volunteers. *Cytotherapy*. 2025. doi:10.1016/j.jcyt.2025.01.007



Dove Medical Press encourages responsible, free and frank academic debate. The content of the International Journal of Nanomedicine 'letters to the editor' section does not necessarily represent the views of Dove Medical Press, its officers, agents, employees, related entities or the International Journal of Nanomedicine editors. While all reasonable steps have been taken to confirm the content of each letter, Dove Medical Press accepts no liability in respect of the content of any letter, nor is it responsible for the content and accuracy of any letter to the editor.

International Journal of Nanomedicine

Dovepress
Taylor & Francis Group

Publish your work in this journal

The International Journal of Nanomedicine is an international, peer-reviewed journal focusing on the application of nanotechnology in diagnostics, therapeutics, and drug delivery systems throughout the biomedical field. This journal is indexed on PubMed Central, MedLine, CAS, SciSearch®, Current Contents®/Clinical Medicine, Journal Citation Reports/Science Edition, EMBase, Scopus and the Elsevier Bibliographic databases. The manuscript management system is completely online and includes a very quick and fair peer-review system, which is all easy to use. Visit <http://www.dovepress.com/testimonials.php> to read real quotes from published authors.

Submit your manuscript here: <https://www.dovepress.com/international-journal-of-nanomedicine-journal>

<https://doi.org/10.2147/IJN.S525193>