

JOURNAL EDITORIAL BOARD'S REVIEW REPORT

Name of journal: World Journal of Stem Cells

Manuscript NO: 90346

Title: Expansion of human umbilical cord derived mesenchymal stem cells in regenerative medicine

Journal Editor-in-Chief/Associate Editor/Editorial Board Member: Shengwen Calvin Li

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Editorial Director: Jia-Ping Yan

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SCIENTIFIC QUALITY	LANGUAGE QUALITY	CONCLUSION
<input checked="" type="checkbox"/> [Y] Grade A: Excellent	<input type="checkbox"/> [] Grade A: Priority publishing	<input type="checkbox"/> [] Accept
<input type="checkbox"/> [] Grade B: Very good	<input checked="" type="checkbox"/> [Y] Grade B: Minor language polishing	<input type="checkbox"/> [] High priority for publication
<input type="checkbox"/> [] Grade C: Good	<input type="checkbox"/> [] Grade C: A great deal of	<input type="checkbox"/> [] Rejection
<input type="checkbox"/> [] Grade D: Fair	language polishing	<input checked="" type="checkbox"/> [Y] Minor revision
<input type="checkbox"/> [] Grade E: Poor	<input type="checkbox"/> [] Grade D: Rejected	<input type="checkbox"/> [] Major revision

JOURNAL EDITORIAL BOARD COMMENTS TO AUTHORS

EIC Specific comments: 1) Abstract; pages 3-4: "Up until passage 15, the recultured hUC-MSC population continued to multiply and double in size." The statement "Up until passage 15, the recultured hUC-MSC population continued to multiply and double in size" lacks scientific justification and logical coherence (continued to multiply and double in size? What could be the size if up to 15 times?). It doesn't provide a clear understanding of the growth pattern of the population. A more precise and scientifically valid statement could be: "Up until passage 15, the recultured hUC-MSC population exhibited continued proliferation, reaching a size of [insert estimated size] based on [insert relevant growth measurements or data]." This revised statement specifies the growth pattern without implying an exact doubling in size at each passage, which may not be scientifically accurate. Additionally, it encourages further clarification on the actual size reached by the population at passage 15, based on available data or measurements. 2) Page 4: "paired-box 6, bone

morphogenetic protein 2, and transforming growth factor $\beta 1$ - please use standardized gene name abbreviations: Pax6, BMP2, TGF β 1. Please follow the rules across the page (e.g., page 3, "octamer-binding transcription factor, sex-determining region Y-box 2"), according to WJSC standardized publications for gene nomenclature. 3) Page 4: "The quality of recultured hUC-MSCs was maintained and showed negative expression of mycoplasma, cytomegalovirus, and endotoxin." To be accurate and logical, please change to "The quality control assessment of recultured hUC-MSCs remained consistent, indicating negative expression for mycoplasma, cytomegalovirus, and endotoxin. However, there was no indication of mycoplasma contamination." 4) Page 4 "Delayed cellular senescence was observed ($P < 0.01$) by increased expression of hTERT at recultured numbers 8-10." (not clear, which contradicts to "Up until passage 15, the recultured hUC-MSC population continued to multiply and double in size." First, use the same language as "passage number" - 8-10 or 15? Which is correct? Fig 3 shows up to R12; Fig 4, R10. Fig 7, R10. 5) Page 3: "trilineage differentiation," where was the data for each passage? What was the passage number in Fig 6? 6) Page 3: "quantitative expansion of MSCs" - What did they define it? 7) Page 4: "CONCLUSION This study advocates the development of a cutting-edge protocol for scaling the stem cell population that can meet rapidly with the increased necessary demand of the in-vitro cell doses, required for in-vivo implantation. Since these MSCs were isolated from the same recultured hUC, they have persistent MSC stemness, as indicated by the International Society of Cellular Therapy, which could make it more cost-effective to uphold good manufacturing practices." This statement overstated their data. Neither in vivo nor dosing data nor manufactory process was provided; instead, a descriptive MSC culture scheme was provided. 8) Fig 5: quantifications? 9) Fig 6: quantifications? "trilineage differentiation," where was the data for each passage? What was the passage number in Fig 6? 10) Fig 8B, C, D: the figure legends are unclear. For example, in Fig8C, R10 changed from 3, 5, 6, 7, to 4. How did they explain the fluctuation of doubling times? The similarity in the fluctuation patterns existed in other panels if they claimed novel and stable QC. 11) Many errors were manifested in crawling around the page. E.g., Page 49: "was confirmed by Alcian blue stained cells" is not the same as page 11 "Alizarin red staining solution"