

Review Form 3

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| Journal Name: | Journal of Pharmaceutical Research International |
| Manuscript Number: | Ms_JPRI_121566 |
| Title of the Manuscript: | Evaluating Novel Dried Formulations for the Preservation of Human Mesenchymal/Stromal Stem Cells |
| Type of the Article | Original Research Article |

Review Form 3

PART 1: Review Comments

| Compulsory REVISION comments | Reviewer's comment | Author's Feedback (Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here) |
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| Please write a few sentences regarding the importance of this manuscript for the scientific community. Why do you like (or dislike) this manuscript? A minimum of 3-4 sentences may be required for this part. | The manuscript tackles the challenge of developing stable freeze-dried cell therapy formulations, offering a systematic screening approach for novel excipients. Its comprehensive methodology, combining physical and biological assessments, offers valuable insights for optimizing cell preservation and storage, contributing to advancements in cell-based therapeutics. | |
| Is the title of the article suitable? (If not please suggest an alternative title) | The title "Evaluating Novel Dried Formulations for the Preservation of Human Mesenchymal/Stromal Stem Cells" is clear and descriptive, effectively conveying the main focus of the study. However, it could be slightly refined to emphasize the specific context of freeze-drying and the assessment of cell viability. A more focused title might be: "Optimization of Freeze-Dried Formulations for the Preservation and Viability of Human Mesenchymal Stem Cells" This title highlights both the preservation and viability aspects of the study, while also specifying the freeze-drying process, which is central to the research. | |
| Is the abstract of the article comprehensive? Do you suggest the addition (or deletion) of some points in this section? Please write your suggestions here. | The abstract is comprehensive and well-structured, effectively summarizing the study's aim, methodology, results, and conclusion. However, there are a few areas where clarity and precision could be improved, particularly in emphasizing the novelty and significance of the findings. The suggestions aim to enhance the abstract by emphasizing the innovative nature of the multi-step screening approach, making it clear how it advances beyond existing methods and contributes to the field. By specifying key findings, such as the viability rates of cells in particular formulations, the results become more impactful and compelling. Additionally, strengthening the conclusion with a brief mention of potential future research or clinical applications can provide a clearer sense of the broader significance and next steps for this research, making the abstract more precise and engaging. | |
| Are subsections and structure of the manuscript appropriate? | The structure and subsections of the manuscript are generally appropriate for a scientific paper of this nature. It follows a standard format, Overall, the structure is logical and supports the flow of the manuscript, making it easy to follow the progression from the problem statement through to the conclusions. Each section is appropriately detailed, contributing to a thorough understanding of the research conducted. | |
| Please write a few sentences regarding the scientific correctness of this manuscript. Why do you think that this manuscript is scientifically robust and technically sound? A minimum of 3-4 sentences may be required for this part. | This work appears to be scientifically and technically solid due to its rigorous experimental design and extensive methodology. The authors methodically describe their method of evaluating novel formulations for freeze-drying cell therapy products, including extensive protocols for determining crucial parameters such as residual moisture, glass transition temperature, and cell viability. The use of numerous assays to cross-validate cell viability guarantees that the findings reached are legitimate and supported by the data. Furthermore, the meticulous selection and justification of excipients, as well as the systematic adjustment of drying settings, reveal a solid awareness of the intricacies involved in live cell preservation, which adds to the study's scientific credibility. | |
| Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form. | References are sufficient. | |

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| <p>Minor REVISION comments</p> <p>Is the language/English quality of the article suitable for scholarly communications?</p> | <p>Yes, the language and English quality of the article are generally suitable for scholarly communication. The manuscript is written in a clear, formal, and scientific style appropriate for an academic audience. It effectively uses technical terminology relevant to the field of cell therapy and cryopreservation while maintaining clarity and precision in its descriptions of experimental methods and results. The structure and flow of the text facilitate understanding of complex concepts and data. However, ensuring that the manuscript is free from minor grammatical errors and that all scientific terminology is consistently used will further enhance its suitability for scholarly communication.</p> | |
| <p><u>Optional/General</u> comments</p> | | |

PART 2:

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| | Reviewer's comment | Author's comment <i>(if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)</i> |
| <p>Are there ethical issues in this manuscript?</p> | <p><i>(If yes, Kindly please write down the ethical issues here in details)</i></p> | |

Reviewer Details:

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