Peer Review Report

Peer Review of “Establishment of a Novel Fetal Ovine Heart Cell Line by Spontaneous Cell Fusion: Experimental Study”

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KEYWORDS

immortal; cell; cells; biology; heart; cardiology; SNP; SNPs; nucleotide; nucleotides; polymorphism; polymorphisms; cellular; cardiocyte; cardiocytes; gene; genes; genetic; genetics; RNA; rRNA; genome; genomes; genotype; genotyping; genotypes; mutations; mutational

This is a peer-review report submitted for the paper “Establishment of a Novel Fetal Ovine Heart Cell Line by Spontaneous Cell Fusion: Experimental Study.”

Round 1 Review

1. Enhancing the presentation for clarity and coherence in outlining the study’s goals and results would improve the paper [1].

2. A more detailed exploration into the cell fusion phenomenon, focusing on the mechanisms of spontaneous fusion, could enrich the study.

3. Investigating and discussing the involvement of specific fusion proteins or cellular factors could yield deeper insights into cell fusion processes.

4. By broadening the comparison to encompass additional immortal cell lines, the study could offer a more comprehensive understanding of its findings’ implications.

5. A comparative analysis of how different cell lines undergo immortalization, their genetic integrity, and their response to viral infections could provide a more nuanced understanding.

6. Extending the functional characterization of the fetal ovine heart–Saudi Arabia (FOH-SA) cell line to include its capability for differentiation and response to various external factors would add value.

7. The paper would benefit from an examination of the FOH-SA cell line’s genetic stability through extended culture durations and numerous passages.

8. Detailing the cell line’s potential for broader biotechnological uses, such as in gene therapy or tissue engineering, would underscore its utility.

9. A discussion on the safety and regulatory aspects related to the cell line’s application in vaccine production, including tumorigenicity risks and quality control adherence, is essential.

10. Incorporating schematic illustrations to summarize the key findings and the spontaneous cell fusion development process would enhance the paper’s visual clarity.

11. Providing details on data and material accessibility, including making sequencing data and cell culture protocols available, would facilitate study replication and transparency.

Round 2 Review

Your manuscript now provides clearer insights and greater detail, which significantly enhances the understanding of the cell line’s characteristics and its potential applications in biotechnology and medicine. The additional data and clarifications have adequately addressed the questions raised, ensuring the work’s robustness and relevance to the field. I believe your findings will make a valuable contribution to the scientific community.

Conflicts of Interest

None declared.

Reference

1. Suleiman K, Aljulidan M, Hussein G, Alkhalaf H. Establishment of a novel fetal ovine heart cell line by spontaneous cell fusion: experimental study. JMIRx Bio. 2024. [doi: 10.2196/53721]

Abbreviations

FOH-SA: fetal ovine heart–Saudi Arabia

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