

REVIEWER'S REPORT

Manuscript No.: IJAR-51528

Date: 14-05-2025

Title: New Frontiers in Gene Therapy for cardiovascular diseases

Recommendation:

Accept as it is.....YES.....

Accept after minor revision.....

Accept after major revision

Do not accept (*Reasons below*)

Rating	Excel.	Good	Fair	Poor
Originality		√		
Techn. Quality		√		
Clarity		√		
Significance			√	

Reviewer's Name: Dr Aamina

Reviewer's Decision about Paper: **Recommended for Publication.**

Comments (*Use additional pages, if required*)

Reviewer's Comment / Report

Abstract Evaluation:

The abstract presents a clear and informative overview of the paper's thematic focus. It effectively introduces gene therapy as a modern medical approach and sets the stage for its application to cardiovascular diseases, emphasizing the significance of addressing genetic causes rather than symptoms. The content is logically structured, with a brief mention of gene responsibility and therapeutic advancements, and it concludes by projecting the future impact of gene therapy in cardiovascular medicine.

Introduction Evaluation:

The introduction successfully highlights the global burden of cardiovascular diseases and the limitations of current treatment methods. The rationale for exploring gene therapy is well-articulated, positioning it as a transformative tool that targets molecular and genetic roots. The tone is appropriate for a scientific review, and the introduction frames gene therapy not only as a potential solution but as a pivotal advancement within biotechnology and biomedical research.

Section 2.1 – Definition and Relevance of Gene Therapy:

This section provides a strong foundational explanation of gene therapy, contextualized within molecular medicine. The theoretical basis is clearly described, and the emphasis on gene transfer technologies and

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vector development underlines the practical considerations in the field. The writing demonstrates a good balance between conceptual clarity and technical accuracy.

Section 2.2 – Historical Perspective:

The chronological table outlining milestones in gene therapy presents a concise and effective historical overview. Key breakthroughs are identified with appropriate citations, providing readers with context for the scientific and clinical evolution of the field. The inclusion of landmark events such as the first clinical trial and the approval of gene therapy drugs adds depth to the narrative.

Section 2.3 – Classification of Gene Therapy:

The categorization of gene therapy into germline and somatic cell therapy is clearly explained, demonstrating a grasp of ethical, technical, and clinical distinctions. The section outlines the inheritance implications and current applicability of each type, especially in the context of human therapeutic development. The relevance of somatic cell gene therapy to current practice is emphasized appropriately.

Organization and Style:

The paper is logically organized, beginning with broad contextual framing and narrowing into specific technical and historical components. The structure supports reader comprehension and maintains a coherent flow throughout. The language is formal, precise, and accessible to a scientifically literate audience. Technical terminology is used appropriately and is well-integrated into the overall discussion.

Relevance and Contribution:

This review provides a timely and relevant synthesis of gene therapy's potential in addressing cardiovascular diseases. The emphasis on genetic correction as opposed to symptomatic treatment aligns with current biomedical research priorities. By combining definitions, historical context, and therapeutic classifications, the paper serves as a comprehensive entry point into an emerging and impactful domain of medical science.

Conclusion:

Overall, the reviewed sections demonstrate a well-informed and structured approach to exploring gene therapy for cardiovascular conditions. The paper balances historical insight, scientific explanation, and future perspective, contributing meaningfully to ongoing discussions in molecular medicine and therapeutic innovation.
