

REVIEWER'S REPORT

Manuscript No.: IJAR-54433

Date: 22/10/2025

Title: Cardioneural Aging in the Context of Cardiomyocyte Aging

Recommendation:

Accept as it is ☐☐☐☐

Accept after minor revision ☐☒☐☐

Accept after major revision ☐☐☐☐

Do not accept (*Reasons below*) ☐☐☐

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

Reviewer Name: Sakshi Jaju

Date: 22/10/2025

Reviewer's Comment for Publication.

This article reviews the connection between heart cell aging and brain aging. It explains key aging mechanisms such as oxidative stress, telomere shortening, mitochondrial dysfunction, and cellular senescence. The author highlights how these factors lead to both cardiac and neural degeneration, suggesting that the heart and brain aging processes are closely linked.

Strengths:

1. Well-organized and comprehensive explanation of molecular mechanisms involved in cardiac and neural aging.
2. Incorporates recent studies and scientific evidence.
3. Emphasizes the interrelationship between heart and brain health, a relatively unexplored but important area.
4. Provides a clear direction for future research and potential biomarkers.

Weaknesses:

1. Lacks experimental or statistical data to support claims..
2. The language is dense and technical, which may be hard for general readers.
3. Some mechanisms discussed remain speculative without clear experimental validation.
4. No graphical summary or visual model to connect heart-brain aging pathways.

Overall Assessment:

A well-researched and insightful review paper that successfully integrates cardiac and neural aging mechanisms. It is valuable for understanding cellular aging and its systemic impact, though it would benefit from simplified explanations and empirical data to strengthen its conclusions.

Recommendation:

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