



## PEER-REVIEW REPORT

**Name of journal:** *World Journal of Experimental Medicine*

**Manuscript NO:** 100166

**Title:** Matrix metalloproteases and their tissue inhibitors as indicators of aortic aneurysm and dissection development in extracellular matrix remodeling.

**Provenance and peer review:** Invited Manuscript; Externally peer reviewed

**Peer-review model:** Single blind

**Reviewer's code:** 08290145

**Position:** Peer Reviewer

**Academic degree:** Associate Professor

**Professional title:** Doctor

**Reviewer's Country/Territory:** Nigeria

**Author's Country/Territory:** Germany

**Manuscript submission date:** 2024-08-08

**Reviewer chosen by:** Hong-Xin Jiang

**Reviewer accepted review:** 2024-11-28 16:05

**Reviewer performed review:** 2024-12-11 02:03

**Review time:** 12 Days and 9 Hours

<b>Scientific quality</b>	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Very good <input checked="" type="checkbox"/> Grade C: Good <input type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
<b>Novelty of this manuscript</b>	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Good <input checked="" type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No novelty
<b>Creativity or innovation of this manuscript</b>	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Good <input checked="" type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No creativity or innovation



<b>Scientific significance of the conclusion in this manuscript</b>	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Good <input type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No scientific significance
<b>Language quality</b>	<input type="checkbox"/> Grade A: Priority publishing <input checked="" type="checkbox"/> Grade B: Minor language polishing <input type="checkbox"/> Grade C: A great deal of language polishing <input type="checkbox"/> Grade D: Rejection
<b>Conclusion</b>	<input type="checkbox"/> Accept (High priority) <input type="checkbox"/> Accept (General priority) <input checked="" type="checkbox"/> Minor revision <input type="checkbox"/> Major revision <input type="checkbox"/> Rejection
<b>Re-review</b>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<b>Peer-reviewer statements</b>	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous
	Conflicts-of-Interest: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

**SPECIFIC COMMENTS TO AUTHORS**

**Abstract** The abstract provides a brief overview of the study’s hypothesis and findings and it mentions the key elements of extracellular matrix (ECM) remodeling and the roles of MMPs and TIMPs. However, 1. The abstract lacks specific details regarding the methods and key results. I suggest the authors Include concise information on the experimental methods (e.g., histological analysis, biomarkers measured) and a brief summary of significant results. 2. The language is somewhat convoluted, making it hard to follow the core message. The authors should simplify sentence structures and clarify the objective and conclusions more directly

**Introduction** The Introduction provides a thorough background on aortic aneurysms, dissections, and the role of MMPs and TIMPs. It Effectively introduces the concept of ECM remodeling. However, 1. The introduction is overly lengthy and dense. The introduction contains excessive detail that could be streamlined to maintain reader interest. I suggest the authors condense background information and focus on the gap in knowledge your study addresses. 2. The hypothesis is somewhat buried within the text. The authors should explicitly state the hypothesis or research question at the end of the introduction for clarity.

**Method** The



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methodology section provides information on histological methods and biomarkers analyzed. Ethical considerations are mentioned. However, 1. The methodology section lacks clarity on sample size, inclusion/exclusion criteria, and statistical methods. I suggest the author clearly outline the study design, including the number of samples, patient demographics, and specific methods used for MMP/TIMP analysis. 2. The authors should ensure figures and tables are properly referenced within the methods section to guide readers. 3. Details on control samples are missing. The authors should specify the control group characteristics and how they were matched to the experimental group. Results The results include relevant findings on MMP and TIMP expression levels in different aortic layers. Figures and tables support the findings. However, 1. The results are presented in long paragraphs, making it difficult to follow key findings. The authors should use bullet points or subheadings to differentiate results related to aneurysms versus dissections. 2. Statistical Analysis shows limited mention of statistical significance. Authors should Include p-values and confidence intervals to support the findings more robustly. 3. Authors should ensure all figures are clearly labeled and that legends provide enough detail to be understood independently Discussion 1. The discussion reiterates many points from the introduction and results. The authors focus on interpreting the findings rather than restating them. Highlight novel insights or implications for clinical practice. 2. Some conclusions about the mechanisms behind aneurysms and dissections are speculative. The author should clearly distinguish between findings supported by data and hypotheses that need further validation. 3. The practical implications of the findings are not well articulated. The author should discuss how these biomarkers could improve diagnosis or treatment of aortic diseases. 4. Some legends lack sufficient detail. The authors should ensure each figure legend explains the figure clearly, including methods and key results. 5. Ensure high-resolution images for clarity. 6. Align figure numbering with references in the text to avoid confusion. 7.



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Several grammatical errors and awkward phrasings detract from readability. The authors should consider language editing.