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PEER-REVIEW REPORT

Name of journal: World Journal of Orthopedics

Manuscript NO: 89263

Title: Adenylate cyclase activates the cAMP signalling pathway to enhance platelet-rich

plasma-treated Achilles tendon disease, a theoretical bioinformatics-based study

Provenance and peer review: Unsolicited Manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 05377042 Position: Peer Reviewer Academic degree: MD

Professional title: Doctor

Reviewer's Country/Territory: Iran

Author's Country/Territory: China

Manuscript submission date: 2023-10-26

Reviewer chosen by: Yu-Lu Chen

Reviewer accepted review: 2023-11-30 14:10

Reviewer performed review: 2023-12-08 15:30

Review time: 8 Days and 1 Hour

	[] Grade A: Excellent [] Grade B: Very good [Y] Grade C:
Scientific quality	Good
	[] Grade D: Fair [] Grade E: Do not publish
Novelty of this manuscript	[] Grade A: Excellent [] Grade B: Good [Y] Grade C: Fair [] Grade D: No novelty
Creativity or innovation of	[] Grade A: Excellent [] Grade B: Good [Y] Grade C: Fair
this manuscript	[] Grade D: No creativity or innovation



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Scientific significance of the conclusion in this manuscript	[] Grade A: Excellent [Y] Grade B: Good [] Grade C: Fair [] Grade D: No scientific significance
Language quality	[] Grade A: Priority publishing [Y] Grade B: Minor language polishing [] Grade C: A great deal of language polishing [] Grade D: Rejection
Conclusion	[] Accept (High priority) [] Accept (General priority) [Y] Minor revision [] Major revision [] Rejection
Re-review	[Y] Yes [] No
Peer-reviewer statements	Peer-Review: [Y] Anonymous [] Onymous Conflicts-of-Interest: [] Yes [Y] No

SPECIFIC COMMENTS TO AUTHORS

- Title needs to be rewritten as it is not grammatically correct. It also should reflect the nature of work rather than a definitive statement while there is no experimental evidence. - PKA pathway is one of the downstream pathways of the cAMP and not the only one. Accordingly, it is not accurate to call the cAMP pathway "known as PKA system". - Authors need to analyse their data for potential upstream receptors that activate the ADCY1-9 and the cAMP pathway that leads to the activation of observed downstream effects (e.g., wound healing). They also need to check the expression of this (these) receptor(s) in the platelet (from public data of bulk or single cell RNA-seq). - It would be also very good to analyse their data to find the central nodes of secretion factors in pletlets that is induced by the activation of these downstream pathways (e.g., wound healing, etc), and confirm the expression of these factors in the platelets. These factors are potentialy the essential factors that mediate the effect of activated platelets. Identification of either the receptors of secreted factors offer a more tractable target for theraputic purposes.