

## PEER-REVIEW REPORT

**Name of journal:** *World Journal of Stem Cells*

**Manuscript NO:** 89156

**Title:** Crosstalk between Wnt and bone morphogenetic protein signaling during osteogenic differentiation

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

**Peer-review model:** Single blind

**Reviewer's code:** 05386819

**Position:** Peer Reviewer

**Academic degree:** MD, PhD

**Professional title:** Surgeon

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

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

**Manuscript submission date:** 2023-10-22

**Reviewer chosen by:** Yu-Lu Chen

**Reviewer accepted review:** 2023-12-05 01:26

**Reviewer performed review:** 2023-12-17 14:47

**Review time:** 12 Days and 13 Hours

Scientific quality	<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 Grade E: Do not publish
Novelty of this manuscript	<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 novelty
Creativity or innovation of this manuscript	<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 type="checkbox"/> Grade B: Good <input checked="" 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 type="checkbox"/> Yes <input checked="" 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

Title: A Review on Crosstalk between Wnt and BMP Signaling in Osteogenic Differentiation 1, Summary: In this manuscript, Arya et al. reviewed the molecular processes underpinning the crosstalk between Wnt and BMP signaling pathways and explain their participation in osteogenic differentiation. The authors summarized that the crosstalk between the Wnt/ $\beta$ -catenin/BMP signaling and many other signaling pathways plays critical regulatory roles in osteogenic differentiation and bone formation. This is an interesting work and may bring some inspirations for small molecule therapy strategy. Here are a few questions about this manuscript. 2. Major comments: 2.1 It would be better if the authors could provide a schematic illustration to summarize the crosstalk between Wnt and BMP signaling pathways in osteogenesis, although they have partially answered this question in Figure 2. Readers may get a more accurate understanding of this review. 2.2 As authors have mentioned in this manuscript, many signaling pathways are involved in osteogenic differentiation. Authors need to clarify why only Notch signaling and ERK1/2 signaling were described in Section 4. Especially, what is the relationship between ERK1/2 signaling pathway and BMP

signaling? 3. Minor comments: 3.1 Some abbreviations lack full names when they first appear in the text, such as DKK-1. 3.2 The tables in this paper are not organized according to the standard format. Sincerely,

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**Reviewer's code:** 02565717

**Position:** Editorial Board

**Academic degree:** MD, PhD

**Professional title:** Chief Doctor, Professor

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

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

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**Reviewer chosen by:** Yu-Lu Chen

**Reviewer accepted review:** 2023-12-10 03:02

**Reviewer performed review:** 2023-12-21 21:14

**Review time:** 11 Days and 18 Hours

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

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This is a good review. I would suggest acceptance