

**Response to Reviewer's comments:**

**Reviewer 1:**

**Comment:** This is a good review. I would suggest acceptance

**Response:** We thank the reviewer for appreciating and accepting our review manuscript.

**Reviewer 2:**

In this manuscript, Arya et al. reviewed the molecular processes underpinning the crosstalk between Wnt and BMP signaling pathways..... This is an interesting work and may bring some inspirations for small molecule therapy strategy.

**Response:** We thank the reviewer for appreciating our review manuscript.

**Comment 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.

**Response:** We agree with the reviewer's comment. We have included a schematic illustration to summarize the crosstalk between Wnt and BMP signaling pathways along with ERKS in osteogenesis (Fig. 3) in the revised manuscript.

**Comment 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?

**Response:** We acknowledge the reviewer's comment. In recent times, more research has been carried out on Notch and ERK1/2 signaling pathways in osteogenic differentiation. Hence, we focussed mainly on Notch and ERK1/2 among other signaling pathways. We have included a separate section on ERK1/2 and BMP signaling (Section 4.4) in the revised manuscript.

**Comment 3:** Some abbreviations lack full names when they first appear in the text, such as DKK-1.

**Response:** We apologize to the reviewer for the inconvenience caused. We have made the necessary changes in the revised manuscript.

**Comment 4:** The tables in this paper are not organized according to the standard format.

**Response:** As suggested by the reviewer, we have changed the tables to the standard format of the journal.