

Peer Review

Review of: "CHD3 Regulates BMP Signalling Response During Cranial Neural Crest Cell Specification"

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In this study, the author proposed that CHD3 regulates BMP signaling responses during cranial neural crest cell specification. This study is a hypothetically driven investigation supported by a loss of function study using a CRISPR/CAS knockout strategy. This study provides compelling insight into CHD3's role in cranial neural crest specification (CNCC), which is important for craniofacial developmental disorders. Although the experimental design and evidence were quite strong and clear, I have a few comments as follows:

1. As the study is entirely based on an in vitro model, providing in vivo confirmation using vertebrate models (Mouse, Zebrafish, Xenopus) would be better.
2. The rescue experiment is not that clear in respect of BMP signaling; analysing only BMP 2 for rescue cannot clearly tell whether BMP signaling can rescue CHD3 knockout. There are other BMP members (BMP4, BMP7) as well, and the author needs to confirm this (as they are claiming BMP signaling).
3. Whether other protein complexes of NuRD, i.e., CHD4, CHD5, can compensate for CHD3 function has remained unexplored.

Declarations

Potential competing interests: No potential competing interests to declare.