Peer Review File

Structure of the turnover-ready state of an ancestral respiratory complex I

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Version 0:

Reviewer comments:

Reviewer #1

(Remarks to the Author)

The authors have addressed my concerns in their response letter and made appropriate changes in the text. After reading the manuscript again, I would like to raise one more point related to Fig. 6 which shows different putative proton transfer pathways. Route 4 appears as a connection between the E channel and the prominent P side exit path in ND5. There is an ongoing discussion about possible P side pathways in ND4 and ND2. The figure suggests that the authors envision a continuous path along the complete length of the membrane arm and not the more traditional view of proton transfer pathways in each of the antiporter like subunits ND5,4 and 2. I think it would be good to clarify your view on this topic to avoid misunderstanding the figure.

Reviewer #2

(Remarks to the Author) In the revised manuscript, the authors addressed all my questions. For me, the manuscript can be published as is. **Open Access** This Peer Review File is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license, and indicate if changes were made.

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