

Review of: "Exploring the ATP Synthesis in Unique Cellular Structures: A Preliminary Hypothesis"

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Potential competing interests: No potential competing interests to declare.

The hypothesis discussed in the manuscript on ATP synthesis through the SET is quite interesting, and the paper is well-organised. I saw the changes made from v1 and they are appropriate, however there are still a few points that are not clear to the reader.

Because this is the proposal of a new mechanism, I believe that a more thorough literature review on the existing ideas would be beneficial to put the new idea into context.

The way the data is presented could be clearer, and it might be useful to discuss potentially confounding factors and controls more in detail, especially the way the different results relate to each other. In my view, more experimental evidence is needed in order to draw the conclusions the manuscript presents. For example, how is the ATP yield confirmed to be solely due to the SET and not from the other well-known processes? Or how is it isolated and preserved from consumption from metabolic processes? It may be something that has been done in the experimental protocol, but it needs to be reported for the reader to come to the same conclusions. I am also struggling to understand the advantage of using labelled H_2PO_4^- . On a minor note, I was unable to find the definition of 'AA' in the text.

Altogether the hypothesis introduces interesting concepts, and I believe that once comments are addressed, the article would be in really good shape.