Review of: "Electron Tunneling in Ferritin and Its Potential Influence on Myelin and Cardiomyocytes"

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Potential competing interests: No potential competing interests to declare.

This is a review article about the impact of electron tunnelling mediated by ferritin in myelin and cardiomyocytes.

The references shown in this review article are well chosen and underscore the point the author is trying to make in terms of considering tunneling more carefully for conduction processes in neural conduction or for conduction processes in the heart muscle.

While the overall article is well written and easy to read and follow, I have a few comments which might make the point more concise and/or help other researchers to more closely evaluate the implications presented here.

1. For the introduction, I understand the tendency for friendly rivalry between disciplines. However, it is probably not biologists alone, but also physicists and chemists who have problems embracing the deeper and macroscopic impacts and implications of tunneling in particular and quantum mechanics on macroscopic systems in general. I would advise to remove particular mentions that biologists do not understand quantum physics and therefore a lot of their theories are flawed and keep it more general by using the term “researchers” or something along those lines.
2. There is a figure illustrating the conduction along a neuron. I would find it helpful if there were a similar figure for the cardiomyocytes. Those two figures could also be used to illustrate the qualitative difference between chemical reactions involving ferritin and tunneling, and which differences in observable quantities arise from that.
3. In the conclusions, a table again that comprises the observed results, and how each of them is in support of a tunneling vs. chemical reaction involving ferritin, would drive the point home more concisely.