

4 October, 2023

Dear Members of the Practice Committee,

We extend our sincere thanks to you and to the external experts (Profs. Guéron, MacDonald, Hakonen, and Yeyati) for conducting the investigation into Prof. Marcus's 2020 *Science* publication. We found the Report of the Expert Panel to be exceptionally clear and thorough. Although we do not agree entirely with every conclusion, we are generally prepared to act on all of the recommendations. We believe, in keeping with the Report's conclusions, that all of the data examined by the committee should be deposited into Zenodo, and that an extensive correction to the *Science* paper should make reference to the full body of data in an updated statistical analysis of the observations. We are prepared to work with Prof. Marcus in good faith to implement that correction (which would replace the current Expression of Concern), in keeping with the Panel's recommendations, though we believe a note will not be sufficient: the text and figures themselves will need to change in order to reflect fully the data acquired in the course of the study. We believe the community would be best served by public release of the Report of the Expert Panel, which we firmly request should occur either prior to or concurrently with publication of the correction. In the event that Prof. Marcus were to decline to implement the necessary corrections, or other compelling circumstances arose, we reserve the right to retract the paper.

We also appreciate the Report's recommendation to our journal specifically that we better clarify the nature of our summary page (which may not have undergone peer-review), and we will look into mechanisms to better inform readers in that respect. Furthermore, we plan to work diligently with other journal publishers to adopt a more systematic protocol to, in the Panel's words, "maintain high standards for fulsome objective reporting on technical details of sample fabrication, and on success rates in fabricating devices that exhibit the behavior described in any publication."

Regarding the question of whether the conclusions of the Panel suggest misconduct and/or questionable research practices on the part of Prof. Marcus and/or his collaborators on the paper, we believe your Committee is better placed than we are to deliberate on that matter. However, in the interest of advising your deliberation, we would offer the following points for consideration:

- 1) Prof. Marcus was asked explicitly by our editor to release *\*all\** of the data from working devices associated with the research presented in the paper. It is plain to see that he did not comply with that request, as through the Panel's diligent work a substantial amount of previously undisclosed data on working devices was uncovered.
- 2) Prof. Marcus furthermore represented to the editor and peer reviewers that 7 out of 8 devices showed Majorana signatures, in contradiction to the Panel's ultimate conclusion that the fraction was 7/15.

3) When we initially sought an investigation of precisely the sort that was ultimately carried out, Prof. Marcus and Prof. Jan Thomsen fought belligerently in correspondence with us and others to keep that from happening.

4) Prof. Marcus and Prof. Thomsen both continued to maintain, in the context of our efforts to justify the need for investigation, that all of the data had been released.

These three points pertain specifically to the following statement in the Panel Report: “Given that the article reports three devices (devices 1, 3 and 4) with a ZBP and one device (device 5) without a ZBP, and that the full NIS data points to seven devices with a ZBP and eight without, the statistical support suggested for the ZBP in the article was not grossly exaggerated. The number of unsuccessful devices (that did not satisfy the protocol), however, was clearly underreported.” Although 3/4 and 7/15 are not statistically equivalent, we respect the Panel’s subjective conclusion that the exaggeration was not “gross” and aim to follow their recommendation to correct the published record, so that readers can see the true statistics underlying the experiment. Nonetheless, it is clear that correcting the record would not have been possible had there been no investigation, and therefore the investigation was fully justified. We respectfully leave the decision to you of whether Prof. Marcus’s decision to with-hold data—both initially before the paper was published and then afterwards when asked repeatedly not to—constitutes misconduct and/or questionable practice. We nonetheless firmly request that Profs. Marcus and Thomsen both acknowledge that the Panel investigation was warranted, as copious real data emerged that they both previously insisted did not exist.

Sincerely,



Jake S. Yeston  
Editor, *Science*