



Florence, March 16th, 2021

*Professor Gottfried Otting
Editor of
Magnetic Resonance*

TITLE: The long-standing relationship between Paramagnetic NMR and Iron-Sulfur proteins: the mitoNEET example. An old method for new stories or the other way around?
AUTHORS: Francesca Camponeschi, Angelo Gallo, Mario Piccioli and Lucia Banci

Dear Gottfried,

Herewith enclosed please find the revised version of the manuscript, where we have addressed all points raised by you and by reviewer #1, and that we have carefully checked for typos and inconsistencies.

Editor

Lines 215 and 219: superfluous commas

Done

Line 360: 'refs Ciofi 2014' is not an acceptable format of citation.

Done

Anonymous Referee #1

In the current revised manuscript Camponeschi and co-workers have significantly enhanced the description of their approach to elucidate the electronic properties of mitoNEET. In particular, the previously almost unreadable NMR experimental paragraph 3.2.2. has been extensively re-written and the emphasis in the Results section has been laid on modifications required to study paramagnetic proteins by solution NMR. Some additional information and visualization of results is now provided in the Appendix.

In principle my original caveat concerning the novelty of each individual method used here still applies. However, as the paper, apart from its significant biological implications, now represents a nice "tutorial" for the investigation of challenging paramagnetic proteins the editors may consider it for publication in Magnetic Resonance.



Minor points:

p6, bottom: “Chemicals shifts data...” should be replaced by “Chemical shift data....”

Done

Fig. 1: I suppose the lower panel, in which parts b and c have been interchanged, replaces the upper panel. The legend should be changed accordingly.

Done

Fig. A3: Why was 20 Hz used for 1JC’N in the calculation of the transfer efficiency of the CON experiment, rather than the more realistic average value of 15 Hz?

We have now used 15 Hz to calculate the transfer functions in Figure A3 in Appendix A.