Reviewer's report

Title: NQO1 gene rs1800566 variant is not associated with the risk for multiple sclerosis

Version: 1  Date: 6 March 2014

Reviewer: Julia Pakpoor

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Major revisions:

The limitations need further discussion. The authors state that the SNP investigated in this study shows a relatively high minor allele frequency (20% in Caucasians). The authors go on to state that the study is adequately powered to detect an OR as small as 1.5. The vast majority of MS associated SNPs have ORs much smaller than this. In light of how common the minor allele frequency of this SNP is and the fact that this is not already an established MS associated SNP, would they not expect, if there is a true positive association, an OR much smaller than 1.5 and therefore perhaps not detectable by the sample size used in this study.

Minor essential revisions:

- The manuscript requires grammatical proof-reading throughout.
- The background part of the abstract makes no justification for the choice to study SNP rs1800566. It is important to include this so that readers can gain an understanding of the project from the abstract.
- "affecting the Central Nervous system" - no need for capital letters for central nervous system.
- please correct “confounder factor” to “confounding factor”
- please write out the abbreviations “OR” and “EDSS” on first use

Discretionary revisions:

“vitamin D status” is unclear, vitamin D levels may be more accurate

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Needs some language corrections before being published

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.
Declaration of competing interests:

I declare that I have no competing interests