Reviewer’s report

Title: Impact of high drinking water nitrate levels on the endogenous formation of apparent N-nitroso compounds in combination with meat intake in healthy volunteers

Version: 0 Date: 21 Jan 2019

Reviewer: Cristina Villanueva

Reviewer's report:

This is a very well written manuscript with clear objectives, appropriate methods and conclusions matching the objectives. It is a relevant contribution to the potential link between exposure to nitrate in drinking water and meat consumption, and exposure to carcinogenic chemicals.

Some minor comments that could be considered by the authors for improvement include:

The authors downplay the results on the comet assay in the discussion. This is a relevant finding suggesting an effect modification by type of meat intake, which is not developed in the discussion. This finding is relevant since the outcome (genotoxicity) is closer to cancer risk than ATCN. The way results are discussed are particularly unbalanced since on the other hand, the authors highlight in the abstract and develop in the discussion the findings on the potential role of vitamin C, which are based on weak associations. The readers may wonder the reason of this unbalanced discussion of findings. Could it be because limited validity or reliability of the comet assay results? If this is the case, limitations should be mentioned in the discussion to guide the interpretation of findings. If results are reliable, they warrant to be developed in the discussion in the framework of previous evaluations, interpretation etc.

Page 10, line 273. "Only after the low drinking water nitrate period…" the authors probably mean "only after the HIGH drinking water nitrate period".

Level of interest
Please indicate how interesting you found the manuscript:

An article of importance in its field

Quality of written English
Please indicate the quality of language in the manuscript:

Acceptable
Declaration of competing interests
Please complete a declaration of competing interests, considering the following questions:

1. Have you in the past five years received reimbursements, fees, funding, or salary from an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

2. Do you hold any stocks or shares in an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

3. Do you hold or are you currently applying for any patents relating to the content of the manuscript?

4. Have you received reimbursements, fees, funding, or salary from an organization that holds or has applied for patents relating to the content of the manuscript?

5. Do you have any other financial competing interests?

6. Do you have any non-financial competing interests in relation to this paper?

If you can answer no to all of the above, write 'I declare that I have no competing interests' below. If your reply is yes to any, please give details below.

No competing interests.

I agree to the open peer review policy of the journal. I understand that my name will be included on my report to the authors and, if the manuscript is accepted for publication, my named report including any attachments I upload will be posted on the website along with the authors' responses. I agree for my report to be made available under an Open Access Creative Commons CC-BY license (http://creativecommons.org/licenses/by/4.0/). I understand that any comments which I do not wish to be included in my named report can be included as confidential comments to the editors, which will not be published.

I agree to the open peer review policy of the journal