Reviewer's report

Title: Ameliorating effect of microdoses of a potentized homeopathic drug, Arsenicum Album, on arsenic-induced toxicity in mice

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Reviewer: Wayne B Jonas

Level of interest: A paper whose findings are important to those with closely related research interests

Advice on publication: Unable to decide on acceptance or rejection until the authors have responded to the compulsory revisions

The topic and findings are of interest but the methods are inadequately described in several areas as summarized below.

1. What is the mg starting "tincture" of arsenic trioxide. Only the ml amount is given. How can one make a "tincture" out of a metal?
2. What force are the "jerks" in producing potency? Height, rate of repetition, duration, time between. Since "potentized" drug is claimed to exert this effect over non-potentized we need a better description.
3. What is the exact composition of the "rectified spirit"? Would not some of the contaminants also get potentized? What is the concentration of ETOH in the final solutions that had 20ml water added at the end?
4. If the mice were orally fed, how do you know what the mouse actually got?
5. What is the "blind checking method"? Where the evaluators blind the exposure substance for each mouse? How can be addressed.
6. It is unclear the frequency of dosing. I count that mouse might get 16 doses a day.
7. The statistical analysis is completely inadequate. A student's T-test [paired or unpaired] is for two groups only. The authors have apparently 11 different groups. This requires at least a MANOVA test with multiple measurement adjustment.
8. I thought AST and GSH levels were measured in the blood, yet they are reported for both liver and blood. Did you measure some concentration per gram of liver or something or is this all blood?
9. Why were MT proteins not examined?
10. Using genes to explain the mechanism of ultra-low dilutions is interesting but does not get at the central issue which is water.
11. How do the authors know what there is in the brownies?
12. The figures are very confusing. Combinations of bar and line graphs in 10 groups is very awkward and I do not understand them.

Competing interests:

None declared.