Reviewer's report

Title: Brahmarasayana protects against Ethyl methanesulfonate or Methyl methanesulfonate induced chromosomal aberrations in mouse bone marrow cells

Version: 1 Date: 10 February 2012

Reviewer: Papiya Bigoniya

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Major Compulsory Revisions

1. Justification to the selected experimental protocols in concern to the targeted aim and objective of the study in not well defined in the Introduction as well as in the Discussion section.

2. Procurement of study drug material (Brahmarasayana) should be authenticated with manufacturing date and date of expiry. Use of study material form five different batches must be justified with need, length of study, collection and processing months as well as consistency of phytoconstituents. Presentation of TLC, HPLC or HPTLC finger printing data may be used for standardization and authentication of the product.

3. Specify what is rasayana 1 and 2.

4. What is the rationale behind selection of the dosing schedule? give justification with scientific data support. Justify the safety profile of rasayana 1 and 2 under study for dosing upto 60 days (Subacute dosing safety profile).

5. In some places of the Discussion section, the results has repeated.

6. Discussion should only include major findings with proper cited justification.

7. The therapeutic implication of the found data in concern to greater interest of patients and scientific community should be discussed.

The study limitations should be defined clearly in the conclusion section.

8. No phytochemical (qualitative or quantitative) estimations has been performed to support phyto-pharmacological mechanistic correlation. In conclusion section presence of some phytochemicals has been claimed citing the compendium only for the plant constituents of rasayana. This needs citation of scientifically published data on presence of these constituents in the study material itself (Brahmirasayana).

9. The free radical predominately produced during cellular damage is hydroxyl radical, which needs to assessed for proving rationale of chromosomal aberration protectors.

10. Positive control (standard drug treated) group has not been included in the study to compare the level of significance of data. Jusify?

Minor Essential Revisions
1. Mention the status of Institutional Animal Ethical Committee approval for the study protocol.

Housing conditions of the animals are to be defined in the Animal section of Methods heading.

2. Mitotic preparation and chromosome analysis study protocol has not been supported by reference citation?

3. The level of p-value significance should be marked in the respective columns of the tables.

4. Toxicant and combination groups are absent in the figure 2.

**Level of interest:** An article of limited interest

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

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

I declare that I have no competing interests.

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