Author's response to reviews

**Title:** Chlorophytum borivilianum (Safed Musli) root extract prevents impairment in characteristics and elevation of oxidative stress in sperm of streptozotocin-induced adult male diabetic Wistar rats

**Authors:**

Nelli Giribabu (nelly.giribabu@gmail.com)
Kilari Eswar Kumar (ekilari@gmail.com)
Somesula Swapna Rekha (swapnam_ray@yahoo.co.in)
Sekaran Muniandy (sekaran@um.edu.my)
Naguib Salleh (naguib.salleh@yahoo.com.my)

**Version:** 2

**Date:** 17 July 2014

Author's response to reviews: see over
17 July 2014
Editor,
BMC Complementary and Alternative Medicine Journal

Dear Editor,

Revision MS: 9241546731240039

Chlorophytum borivilianum (Safed Musli) root extract prevents impairment in characteristics and elevation of oxidative stress in sperm of streptozotocin-induced adult male diabetic Wistar rats by Nelli Giribabu, Kilari Eswar Kumar, Somesula Swapna Rekha, Sekaran Muniandy and Naguib Salleh

I would like to submit the revised version of our manuscript. Below are point-to-point reply to the reviewers’ comments

Thank you for considering our manuscript for publication in your journal

Best regards

Dr N Salleh

Corresponding author
Reviewer 1

Reviewer's report:

I find this an interesting paper, obviously it would be useful to further investigate:

a) the chemical composition of the root extract

Reply: Thank you for your suggestion. We have performed a FTIR spectra analyses and the results are shown in figure 1 and in table 1. The major component is the phenolic compound

b) the mode of action of the extract particularly with respect to its antioxidant properties.

Reply: Thank you for your suggestions. We have further evaluate the levels of endogenous anti-oxidant enzymes (superoxide dismutase, catalase and glutathione peroxidase) and levels of endogenous free radicals (peroxide and nitric oxide) which were found to be maintained near normal and decreased respectively following administration of the root extract. We have performed an in-vitro study to display the free radical scavenging activity of the root extract. Additionally, we have also evaluated the expression of caspase-3, an apoptosis marker which was found to be reduced following *C. borivilianum* extract treatment to diabetic rats.

It is not clear from the study whether this antioxidant effect is confined to testicular sites and obviously it would be of interest to determine its organ specificity and its evident anti-diabetic effects.

Reply: Thank you for your suggestion. We have added these limitations in our discussion. Our future study will address the effect of *C. borivilianum* extract on oxidative stress in testis and epididymis in diabetes.

I feel that a note to outlining these limitations to this current study should be included in any published version of this paper.

Reply: Thank you for your suggestion. We have amended the text to incorporate new experiments and other points suggested.

A minor issue the term sperm is a plural noun so sperms is poor English usage.

Reply: We have replaced with the correct spelling throughout the text
Reviewer 2

Minor Essential Revisions -

1. Safed Musli or Chlorophytum borivilianum (family: Lilliaceae) is a highly valued medicinal plant in India and is considered as a “white gold” in Indian system of Ayurveda. (This needs reference).

Reply: We have added reference to this statement

Discretionary Revisions

1. The author might include more review of the previous works done in this field.

Reply: Since our study is the first to investigate plant root extract effect on sperm in diabetes, therefore no previous works have been done with respect to C. borivilianum effect on sperm parameters. We have added the work by Thakur et al which showed the benefits of this extract on sperm in normal healthy rats (Introduction section)

2. The author could include the phytochemical test results in order to show that their trial drug was of the desired quality.

Reply: We have performed a FTIR spectroscopy which detect the presence of mainly phenolic compound (see figure 1 and table 1)

Reviewer 3

The manuscript should be accepted after considering some minor corrections:

1. In the present manuscript limitations of work has not been stated.

Reply: We have added limitations to the study in the discussion section

2. All figure legends should be modified and made short. Avoid stating results in figure legend and provide important labeling only to make it clear.

Reply: We have made necessary correction for this point

3. Manuscript should be thoroughly revised for language corrections and to avoid grammatical errors. At some instance sentence is not properly constructed and need attention for example “Together with the reduced in lipid peroxidatio.............stress in diabetes” (last para of discussion, 6 lines up)
Reply: We have made thorough language revision to the entire manuscript.

4. Since authors are communicating research article so following scientific language in writing manuscript is very important. I suggest avoid using "our study"; our findings" "we have" etc.

Reply: We have replaced these terms where necessary