Reviewer's report

Title: Antisickling and toxicological evaluation of the leaves of Scoparia dulcis Linn (Scrophulariaceae).

Version: 3 Date: 9 June 2015

Reviewer: Olubanke O Ogunlana

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Report on review of Antisickling and toxicological evaluation of the leaves of Scoparia dulcis Linn (Scrophulariaceae).

Abstract:

Result section: Percentage sickling inhibition was not compared to positive control. The LD50 value at 8000 mg/kg body weight, intraperitoneally is not acceptable according to OECD. Toxicological evaluations at 250 and 500 mg/kg showed mild congestion in virtually all the target organs, though within normal limits (Lines 45 - 47) is completely unacceptable. If mild congestion is observed all the smallest dose, there is need for concern.

Conclusion section: The antisickling results confirmed traditional usage of Scoparia dulcis in the management of Sickle cell disorders and a candidate for further investigations. The extract can be considered safe, but caution should be exercised during prolong usage (Lines 48 - 50) there is insufficient result to make this conclusion. The plant must be compared with positive control and toxicological dose has to be decrease to understand the dose at which the extract id safe to use.

Introduction is okay

Materials and methods

Line 100 - preparation of plant extract: this should be collection of plant. The last statement should be added to extraction and fractionation of plant extract sub title (Line 129).

Line 114 - phytochemical investigation methods are not clear. There should be adequate clarification.

Line 129 - methods of drying of solvent not indicated, temperature used should be indicated.

Line 136 - 139: ethical approval for the use of human participants was not indicated.

The experimental design of the antisickling evaluation was not well design or reported. The antisickling evaluation of different fractionated extract for petroleum ether, chloroform and n-butanol was not included on the methods.

Line - 148 - the purpose of uncovered test tubes was not define. This should be
explained.

Line 163 - the toxicological doses should be expressed as mg/kg body weight to allow for consistency of the reporting. The authors should check for the correct work, is the acute dose intraperitoneal (abstract line 45 or oral (line 162)?

Results
The statistical level of significant was not indicated for in table 2. The reference for the established level of significant must be indicated Line 192 - 193).

The histological presentation should include that of the positive and negative controls as well of the test substance groups.

Reference
There is no conformity to standard in the referencing format. Some journals were presented in their abbreviated format (reference no. 6, 10, etc.) while some were written in full (3, 5, etc.).

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

Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.