Reviewer's report

**Title:** Evaluation of antibacterial and cytotoxic activity of Artemisia nilagirica and Murraya koenigii leaf extracts against mycobacteria and macrophages

**Version:** 2  **Date:** 12 December 2013

**Reviewer:** Lyndy McGaw

**Reviewer's report:**

Minor essential revisions:

The manuscript has improved from the first submission after the authors have addressed many of the issues raised in the previous reviews. However, there are still some grammatical errors and some other minor concerns that should be considered.

1. When the plant species tested for antimycobacterial activity are mentioned for the first time, the family should also be included in brackets after each name.

2. Although the identification and deposition of voucher specimens has been described, the voucher specimen numbers allocated by the herbarium should be given for each plant species.

3. The authors cite only their own papers to support the controversial issue of the ability of M. smegmatis to infect macrophages and it would strengthen their argument if more relevant papers from other research groups were discussed.

4. In the abstract methods the impression is given that the infection of macrophages was done after treatment with plant extracts while in the body of the paper it is mentioned that extracts were used to treat cells before and after infection. Was one group of cells treated before and another treated after or was the same group of cells treated both before and after infection?

5. Since antimycobacterial activity and cytotoxicity assays have been done it would be useful to include the selectivity index (SI) values (ratio of toxicity to activity: $SI = IC50 / MIC$) for the two most active plant extracts. Calculation of MIC values for plant extracts provides a much easier way of comparing activity, and involves a simple broth dilution method. Determining the SI values would provide an indication of whether or not the extracts are generally toxic or have some selective activity against the mycobacteria.

6. The references need attention as the formatting is irregular in places, incorrectly beginning with the initials of the authors for some references. Reference 18 is a duplicate of reference 13.

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

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