Reviewer's report

Title: Native New Zealand plants with anti-proliferative activity towards Mycobacterium tuberculosis

Version: 1 Date: 16 May 2010

Reviewer: Scott Franzblau

Reviewer's report:

Major compulsory revisions:

1) Page 1, line 31. If one considers that today's antibiotics, including those used for TB, have MICs in the 0.05 - 0.5 ug/ml range and need to be dosed at 200 - 1000 mg per day to achieve clinical efficacy, then for extracts with an MIC of 5 mg/ml one would need to consume on the order of 2-100 kg per day of aqueous or alcohol extract. This assumes of course that the method of extraction used in this study was as efficient at extracting the active principles as that used traditionally. Therefore although the plants were chosen on the basis of traditional usage and could eventually yield compounds that lead to the development of clinically useful drugs, it is doubtful that they contain anti-TB principles that would explain their traditional usage. More likely they contained principles that were immunomodulatory or suppressed cough.

2) Table 3. Because this table is all about potency, the units (mg/ml) should be indicated in the column heading, not in the Table footnote.

3) Page 5, line 8. A brief explanation for the use of 55C followed by chilling at -20C should be provided.

Minor essential revisions:

4) page 6, Line 8. All components of the OADC supplement are provided in the parenthesis except for the O - oleic acid - this should be added.

Discretionary revisions:

5) Discussion: In general M. tuberculosis tends to have lower MICs than M. smegmatis to a variety of clinical and experimental compounds. In this study the opposite is observed. In any case, it might be pointed out that the different potencies observed might be influenced by the difference in culture media (the 7H9 + OADC contains albumin which binds many compounds) and incubation time (a purely static agent that is not extremely stable is likely to degrade somewhat over a 2 week incubation period allowing for re-growth).

6) Discussion, page 11. The top third of the page duplicates what already exists in the manuscript. It is suggested that this be omitted.

Level of interest: An article of limited interest
Quality of written English: Acceptable

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