Reviewer's report

Title: Effectiveness of three medicinal plants in diabetic pregnancy: modulation of T cell proliferation

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Reviewer: Ching-Hua Yeh

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The authors have examined the extract of three medicinal plants with antioxidant, anti-hyperglycemic and immunosuppressive activities. The reason to perform evaluations of these plants is the documented traditional medicine use in diabetes and diabetic pregnancy. The authors try to explain their action through antioxidant activities and the modulation of T cell proliferation. The actual execution of the experiments is insufficient and must be addressed before this manuscript could be published.

Major Compulsory Revisions:

1. How the dosages of those plant extracts applied in STZ rats were determined? Were those extracts sterilized to prevent infection or how to prevent lipopolysacharride contamination before intraperitoneal injecting into rats or adding into culture medium?

2. Since the authors said that there was not good correlation between vitamin C levels and antioxidant activities of the plant extracts, Table 2 should be addressed more clearly. The polyphenol content in the extracts of which fraction is not indicated in present form. The correlation between the polyphenol contents and the antioxidant activities in those extracts should be analyzed if possible.

3. The authors claimed that low-dose STZ administrations modulate the T cell activation and the plant extracts decrease T cell proliferation during diabetic induction. It seems that the activated T cell distribution and IL-2 concentration in pregnant STZ rat with and without plant extracts treatment will be more comprehensive than in vitro data in present manuscript.

Minor Essential Revisions

1. In method section, RPMI1940 should be replaced by RPMI1640.

2. In Figure 3 and 4, please change the glycemia unit from g/L to mg/dl.

3. In Table 2, the levels of the compound presented should be identified clearly, such as low (+) or high (+++) levels, percentage, or concentration et al.

4. In figure 2, the authors should address the meaning of “Equal to Trolox”.

5. In figure 5, although the extract Picra-But didn’t influent T-cell activity under normal condition, it significantly decreased T-cell proliferation under stimulation. Is this phenomenon safe if this extract apply in diabetic pregnant patients with infectious/inflammatory situation?
6. The authors mentioned that the low-dose STZ administration wouldn’t affect the embryo development in pregnant Wistar rats. Whether the extracts affect the body weight in the type 1 diabetic pregnant rats and their embryo development should be addressed for safety consideration if they were used in pregnant women.

**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 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.