Reviewer's report

**Title:** Total Flavonoids of Bidens bipinnata L. Ameliorate Experimental Adjuvant-induced Arthritis through Induction of Synovial Apoptosis

**Version:** 6  **Date:** 27 April 2015

**Reviewer:** Ibrahim turan

**Reviewer's report:**

Dear Editors;

First of all I want to thank you choosing me for evaluation.

In this manuscript the authors describe a study that determined chemical compositions and apoptotic effects of Bidens bipinnata L. Ameliorate. It is an original idea to study this relationship, but some deficiencies are found.

Although there is no study in the literature searching with four key words (Bidens bipinnata L. Ameliorate, synovium (this term is absent in MeSH), apoptosis and rheumatoid arthritis), the manuscript titled "Total Flavonoids of Bidens bipinnata L. Ameliorate Experimental Adjuvant-induced Arthritis through Induction of Synovial Apoptosis" should be accepted with major changes.

1. Page1 line 43: Term of Synovium is absent in MeSH as a keyword.
2. Study groups design is not clear. Group definitions (A, B, C, D, E) should be given in Materials and Methods section.
3. Ethical approval number was not given in Material and Methods section.
4. I can not understand preparation of TFB. Too long.
5. Page 6 line 113: What is temperature of hot ethanol in preparation of TFB.
6. Okulda ref makaleye bak GTT was used in the study as a positive control. Why was its concentration choosen at 10 mg/kg? The cytotoxic effects of vinblastin against cancer cell lines should given concentrations and times dependent instead of one concentration (1 µM).
7. Page 8 line 165 and 166: Serum samples collected. But plasma levels IL6, … determined. Which sample was used? plasma or serum?
8. Page 8 line 173: V/cm should be written instead of 50 V.
9. The license number for SPSS programme should be given in Statistical Analysis section.
10. Page 10 line 208: According to the manuscript, “The doses of 10-250 mg/kg of TFB did not exhibit any mortality or associated symptoms, such as convulsion, ataxia,….. How was decide the low toxicity is not clear.
11. How was done toxicity assay? This assay must explain in materials and methods section.
12. Discussion section was poorly written. The results of HPLC analyses were
not discussed in the light of literature. What are the flavonoids induce apoptosis? At least, a few literatures may add in Discussion Section. Results may compare with literature.

13. Page 12 line 257: The first paragraph is actually conclusion, not Discussion.

14. Page 13 line 269-270: Is this sentence finding or speculation? If it is finding must support with result. If it is speculation must support with reference.

15. Figure 2B should be corrected.

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**Level of interest:** An article of importance in its field

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

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

**Declaration of competing interests:**

I declare that I have no competing interests