Reviewer’s report

Title: Modulation of T cell proliferation and cytokine response by Plumbagin extracted from Plumbago zeylanica in collagen induced arthritis

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Reviewer: Pierre Kamtchouing

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In the manuscript entitled “Modulation of T cell proliferation an cytokine response by plumbagin extracted from Plumbago zeylanica in collagen induced arthritis”, Poorsala et al., evaluated the pharmacological effects plumbagin, a quinone isolated from the roots of Plumbago zeylanica on collagen induced arthritis.

Major comments
The most serious concerns the presentations of results and the statistical analysis
- The presentation of the results is not well done. The results obtained cannot be appreciated in the figure.
- Statistical analysis: the authors should associate an appropriate test to ANOVA to separate the means.

Minor comments
Materials and methods
- Immunization, in this section, the authors wrote that Mice were immunized with emulsion A and emulsion B. the content or the preparation of these emulsion solutions is not mentioned anywhere in the test.
- The dosage of indomethacin administered to mice is not given in the test.
- The voucher number of the specimen deposited in the herbarium is not given.
- Animals: authors should specify the conditions in which the animals were kept. Was the experimentations carried out in this study were in accordance with institutional guidelines for animal ethical comity?
- Treatment: the authors said that “plumbagin was given thrice weekly for 4 weeks starting from day 0 to day 42”. 42 days represent 6 weeks and not 4.
- The discussion of results could be improved.

Although the study presented is interesting, there are some deficiencies, especially in results section. In conclusion, corrections are required to improve the scope of this work.

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: Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests:

I declare that I have no competing interests