

This paper is related to reviewing the manuscript titled " **The alleviation of muscone on DSS-induced ulcerative colitis in mice through its antioxidative effects via the MyD88/ERK signaling pathway**"

This work employed muscone to treat DSS-induced colitis in C57BL/6 mice. Muscone therapy significantly decreased gross bleeding and histological damage. Gait study showed improvements in swing time, brake time, propel time, and posture.

Firstly, Although the proposed study is successful in terms of organization, presentation, content and results, major revision given in the following items need to be performed.

- 1) Improve the abstract and conclusion section, enhance the manuscript to convey the purpose, objectives, method and major findings, especially results.
- 2) Use abbreviations after the first use in the text, in the abstract and throughout the paper.
- 3) The literature review is quite insufficient in the introduction section. Complete the introduction and literature sections of the manuscript by providing similar studies from the years 2023-2024 and/or new and current studies that will attract the attention of the readers.
- 4) Are there any other statistical and/or learning-based methods used by the authors other than the ANOVA test using R programming? Why are their methods weak?
- 5) More analysis results should be included in the results and findings section.
- 6) A comprehensive table is needed to present the results.
- 7) The conclusion section really needs to be improved
- 8) Clean the paper of English spelling and punctuation errors

My decision is major revision. I would like to inform you that if all the requested items are not completed in this revision, my decision will be to reject the application in the second round. Otherwise, I do not see any harm in publishing the manuscript once the above revisions are made.

Best regards.