

## REVIEWER'S REPORT

Manuscript No.: IJAR-50697

Date: 17/3/2025

### Title:

**Characterization of gut and liver microbiome alterations in a streptozotocin induced rat model of liver damage**

### Recommendation:

Accept as it is .....

**Accept after minor revision** .....

Accept after major revision .....

Do not accept (*Reasons below*) .....

| Rating         | Excel.    | Good | Fair | Poor |
|----------------|-----------|------|------|------|
| Originality    |           | Good |      |      |
| Techn. Quality |           | Good |      |      |
| Clarity        | Excellent |      |      |      |
| Significance   |           | Good |      |      |

Reviewer Name: Dr.Sumathi

Date: 17/3/2025

### Reviewer's Comment for Publication.

*(To be published with the manuscript in the journal)*

*The reviewer is requested to provide a brief comment (3-4 lines) highlighting the significance, strengths, or key insights of the manuscript. This comment will be Displayed in the journal publication alongside with the reviewers name.*

The microbiome refers to the trillions of microorganisms, including bacteria, viruses, fungi and protozoa that live in and on our bodies. It is present in various parts of the body, such as the gut, skin, mouth and lungs.

### Detailed Reviewer's Report

- 1. In microbiology, a bacterial isolate refers to a single species of bacterium obtained in a pure culture, separated from a mixed population of microbes.**
- 2. These isolates are crucial for identifying pathogens, understanding microbial diversity, and developing new treatments.**

**REVIEWER'S REPORT**

- 3. Liver damage refers to any injury or impairment to the livers function, which can range from mild inflammation to severe scarring and ultimately, liver failure.**
- 4. Streptozotocin also known as streptozocin, is a chemical compound derived from the bacterium streptomyces achromogenes that is particularly toxic to the insulin producing beta cells of the pancreas, used both as a chemotherapeutic agent and in research to induce diabetes in experimental animals.**
- 5. The liver microbiome a distinct microbial community within the liver, is populated from the gut in a selective manner and influences hepatic immunity and overall health, with dysbiosis potentially contributing to liver diseases.**
- 6. This research findings are one of the invivo and invitro work. It is medicinally valued one.**
- 7. Can be given flow chart of significant points in introduction part.**
- 8. Tables with results are given good. Need to be added graphs for results.**
- 9. Summary parts can be included.**
- 10. References should be in alphabetical order.**
- 11. Can be continued with molecular level to explore more about this topic.**
- 12. After minor corrections eligible to publish in your journal.**