Dear editors and reviewers:

Thank you very much for your letter and for the reviewers' comments concerning our manuscript entitled "Duodenal-jejunal bypass increases intraduodenal bile acids and upregulates duodenal SIRT1 expression in high-fat diet and streptozotocin-induced diabetic rats". Those comments are very valuable and helpful for revising and improving our paper. Based on the comments and suggestions, careful modifications have been made to the original manuscript.

We hope the following point-by-point responses and the new revision of the manuscript will meet the editor's and reviewers' requirements for considering this manuscript for publication in World Journal of Gastroenterology. Thank you very much for giving us an opportunity to revise our manuscript.

Reviewer #1:

Scientific Quality: Grade B (Very good)

Language Quality: Grade B (Minor language polishing)

Conclusion: Minor revision

Specific Comments to Authors: This study is about the duodenal-jejunal bypass increases intraduodenal bile acids and upregulates duodenal SIRT1 expression in high-fat diet and streptozotocin-induced diabetic rats. The experiment is very well designed. The methods are described in detail, results are clearly presented. Some minor language polishing should be corrected. Figures and tables require an editing.

Response: Thank you very much for regarding our study very well designed. As suggested by the reviewer, we have carefully revised the manuscript, and send our revised manuscript to a professional English language editing company for further language polishing, and we have uploaded a new language certificate in the system. We adjusted the font, the thickness of the axis, the distance between the axis label and the axis, and many other details in the figures to make them more uniformly. The table in the original manuscript

was not a standard three-line table, and we have corrected it. Your comments and suggestions are very useful and valuable for us to improve the quality of the manuscript.

Reviewer #2:

Scientific Quality: Grade B (Very good)

Language Quality: Grade A (Priority publishing)

Conclusion: Minor revision

Specific Comments to Authors: This is an interesting study of surgical effects of duodenal-jejunal bypass on duodenal SIRT1 expression and uncover the potential crosslinks between BAs and SIRT1. The results are informative and well discussed. The study can be accepted as it is. No specific comments.

Response: We really appreciate the reviewer for regarding our study interesting, informative, well discussed, and could be accepted as it is. Special thanks to you for your good comments and patient review of our manuscript.

Reviewer #3:

Scientific Quality: Grade B (Very good)

Language Quality: Grade B (Minor language polishing)

Conclusion: Minor revision

Specific Comments to Authors: Duodenal-jejunal bypass is a well-designed experimental procedure investigating the weight-independent anti-diabetic mechanisms of Roux-en-Y gastric bypass. It can improve glucose homeostasis in both diabetic rats. Duodenal mucosal resurfacing, an endoscopic procedure that involves circumferential hydrothermal ablation and subsequent regeneration of the duodenal mucosa, elicits dramatic and durable glycemic improvements in patients with type 2 diabetes mellitus. Through chemical sensors located in the mucosa and ENS, the duodenum detects changes in luminal contents and further triggers a gut-brain negative feedback loop to inhibit exogenous nutrient intake and endogenous liver nutrient production.

SIRT1 is expressed in the duodenal mucosa, which is significantly inhibited in high-fat diet-fed insulin-resistant rats. Duodenum-specific knockdown of SIRT1 is sufficient to induce hepatic insulin resistance and increase hepatic glucose output in normal chow-fed rats. In this study, the authors investigated the impact of duodenal-jejunal bypass on duodenal bile acids signaling and SIRT1 expression in high-fat diet and streptozotocin-induced diabetic rats, and further explore the roles of bile acids in modulating SIRT1 expression. The study is very well designed and the results are very interesting. The manuscript is very well written. The conclusion is based the results. The reviewer recommends to accept the manuscript after a minor editing. This is an interesting study of surgical effects of duodenal-jejunal bypass on duodenal SIRT1 expression and uncover the potential crosslinks between BAs and SIRT1. The results are informative and well discussed. The study can be accepted as it is. No specific comments.

Response: Thank you very much for your patient and careful review of our manuscript. We sincerely appreciate for your comments.

Science editor:

The manuscript has been peer-reviewed, and it' s ready for the first decision.

Language Quality: Grade B (Minor language polishing)

Scientific Quality: Grade B (Very good)

Response: Thank you very much for your comments. We have further polished the language.

Company editor-in-chief:

I have reviewed the Peer-Review Report, the full text of the manuscript, and the relevant ethics documents, all of which have met the basic publishing requirements of the World Journal of Gastroenterology, and the manuscript is conditionally accepted. I have sent the manuscript to the author(s) for its revision according to the Peer-Review Report, Editorial Office's comments and

the Criteria for Manuscript Revision by Authors. Before final acceptance, uniform presentation should be used for figures showing the same or similar contents; for example, "Figure 1Pathological changes of atrophic gastritis after treatment. A: ...; B: ...; C: ...; D: ...; E: ...; F: ...; G: ...". Please provide decomposable Figures (in which all components are movable and editable), organize them into a single PowerPoint file. Please authors are required to provide standard three-line tables, that is, only the top line, bottom line, and column line are displayed, while other table lines are hidden. The contents of each cell in the table should conform to the editing specifications, and the lines of each row or column of the table should be aligned. Do not use carriage returns or spaces to replace lines or vertical lines and do not segment cell content. Please check and confirm whether the figures are original (i.e. generated de novo by the author(s) for this paper). If the picture is 'original', the author needs to add the following copyright information to the bottom right-hand side of the picture in PowerPoint (PPT): Copyright ©The Author(s) 2022. Before final acceptance, when revising the manuscript, the author must supplement and improve the highlights of the latest cutting-edge research results, thereby further improving the content of the manuscript. To this end, authors are advised to apply a new tool, the Reference Citation Analysis (RCA). RCA is an artificial intelligence technology-based open multidisciplinary citation analysis database. In it, upon obtaining search results from the keywords entered by the author, "Impact Index Per Article" under "Ranked by" should be selected to find the latest highlight articles, which can then be used to further improve an article under preparation/peer-review/revision. Please visit our RCA database for more information at: https://www.referencecitationanalysis.com/.

Response: Thank you very much for give us an opportunity for revision, we have carefully revised the manuscript according to the editors' and reviewers' comments.

1. We have revised the figure legends so that the presentation is uniform.

2. We have prepared decomposable Figures and organize them into a single PowerPoint file. The copyright information was added to the bottom right-hand side of the picture in PowerPoint. The file was uploaded via the F6Publishing system.

3. We have changed table 1 into a standard three-line table.

4. We have added the article highlights in the revised manuscript，and this section has already been polished by a professional English language editing company.