

PEER-REVIEW REPORT

Name of journal: *World Journal of Gastroenterology*

Manuscript NO: 77593

Title: Duodenal-jejunal bypass increases intraduodenal bile acids and upregulates duodenal SIRT1 expression in high-fat diet and streptozotocin-induced diabetic rats

Provenance and peer review: Unsolicited manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 06078865

Position: Peer Reviewer

Academic degree: MD

Professional title: Doctor

Reviewer's Country/Territory: Japan

Author's Country/Territory: China

Manuscript submission date: 2022-05-26

Reviewer chosen by: AI Technique

Reviewer accepted review: 2022-05-30 23:55

Reviewer performed review: 2022-06-12 23:31

Review time: 12 Days and 23 Hours

Scientific quality	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Very good <input type="checkbox"/> Grade C: Good <input type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
Language quality	<input type="checkbox"/> Grade A: Priority publishing <input checked="" type="checkbox"/> Grade B: Minor language polishing <input type="checkbox"/> Grade C: A great deal of language polishing <input type="checkbox"/> Grade D: Rejection
Conclusion	<input type="checkbox"/> Accept (High priority) <input type="checkbox"/> Accept (General priority) <input checked="" type="checkbox"/> Minor revision <input type="checkbox"/> Major revision <input type="checkbox"/> Rejection
Re-review	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Peer-reviewer statements	Peer-Review: [<input checked="" type="radio"/>] Anonymous [<input type="radio"/>] Onymous Conflicts-of-Interest: [<input type="radio"/>] Yes [<input checked="" type="radio"/>] No
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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.

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Position: Peer Reviewer

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Professional title: Doctor

Reviewer's Country/Territory: South Korea

Author's Country/Territory: China

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Peer-reviewer statements	Peer-Review: [<input checked="" type="radio"/>] Anonymous [<input type="radio"/>] Onymous Conflicts-of-Interest: [<input type="radio"/>] Yes [<input checked="" type="radio"/>] No
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Reviewer's code: 06078953

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Reviewer's Country/Territory: Germany

Author's Country/Territory: China

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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.