



PEER-REVIEW REPORT

Name of journal: *World Journal of Diabetes*

Manuscript NO: 85364

Title: A hypothesis that Alpha-amylase Evokes Regulatory Mechanisms Originating in the Pancreas, Gut and Circulation, which Govern Glucose/Insulin Homeostasis

Provenance and peer review: Invited Manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 04152279

Position: Peer Reviewer

Academic degree: MD

Professional title: Doctor

Reviewer's Country/Territory: China

Author's Country/Territory: Sweden

Manuscript submission date: 2023-04-24

Reviewer chosen by: AI Technique

Reviewer accepted review: 2023-04-30 04:32

Reviewer performed review: 2023-05-10 03:43

Review time: 9 Days and 23 Hours

Scientific quality	<input checked="" type="checkbox"/> Grade A: Excellent <input 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 Grade E: Do not publish
Novelty of this manuscript	<input checked="" type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Good <input type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No novelty
Creativity or innovation of this manuscript	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Good <input type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No creativity or innovation



Scientific significance of the conclusion in this manuscript	<input checked="" type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Good <input type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No scientific significance
Language quality	<input checked="" type="checkbox"/> Grade A: Priority publishing <input 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 checked="" type="checkbox"/> Accept (General priority) <input 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="checkbox"/> Anonymous <input type="checkbox"/> Onymous
	Conflicts-of-Interest: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

SPECIFIC COMMENTS TO AUTHORS

The dependency of pancreatic enzyme synthesis on insulin release has been fully studied. In recent years, the influence of pancreatin on insulin secretion has also been paid more and more attention . Many studies suggest that alpha-amylase can not only digest starch, but also affect insulin secretion through hormone-like action. This has been further confirmed in the study on bariatric surgery, such as biliary-pancreatic bypass, biliary-pancreatic bypass with duodenal bypass, can effectively alleviate type 2 diabetes. Alpha-amylase can reduce blood sugar concentration by inhibiting the absorption of glucose and promoting the synthesis of glycogen, which inhibits the release of insulin. In addition, alpha-amylase can also directly effect pancreatic islets to inhibit insulin secretion, thereby providing protection for pancreatic islet cells. Putting forward the hypothesis that alpha-amylase evokes regulatory mechanisms originating in the pancreas, gut and circulation, which govern glucose/insulin homeostasis. The topic is novel and has great guiding significance for clinical work.



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Provenance and peer review: Invited Manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 02524651

Position: Peer Reviewer

Academic degree: MD

Professional title: Professor

Reviewer's Country/Territory: China

Author's Country/Territory: Sweden

Manuscript submission date: 2023-04-24

Reviewer chosen by: Geng-Long Liu

Reviewer accepted review: 2023-05-31 00:27

Reviewer performed review: 2023-06-04 02:45

Review time: 4 Days and 2 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
Novelty of this manuscript	<input checked="" type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Good <input type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No novelty
Creativity or innovation of this manuscript	<input checked="" type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Good <input type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No creativity or innovation



Scientific significance of the conclusion in this manuscript	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Good <input type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No scientific significance
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Re-review	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Peer-reviewer statements	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous
	Conflicts-of-Interest: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

SPECIFIC COMMENTS TO AUTHORS

In the review “A hypothesis that Alpha-amylase Evokes Regulatory Mechanisms Originating in the Pancreas, Gut and Circulation, which Govern Glucose/Insulin Homeostasis “, the authors suggest that bariatric BPD/BPD-DS surgery highlights alpha-amylase-induced, anti-incretin-like regulation of glucose metabolism, which protects the pancreatic beta cells from exhaustion and subsequent failure. The acini-islet-acinar (AIA) axis assumes that insulin intra-pancreatically stimulates alpha-amylase synthesis and alpha-amylase reciprocally inhibits insulin production, thus making alpha-amylase a candidate for being an anti-incretin. This review involves an interesting area which may contribute to develop new treatment strategy in the future both on diabetes and obesity based on the new mechanism. 1, There are many types of bariatric surgery and forms of biliopancreatic diversion, as shown in Fig 2 and Fig 3. So, please describe the different clinical outcomes in treating diabetes and obesity. 2, Is there any difference regarding the distribution of incretins in different parts of intestine (duodenum, jejunum, ileum)? Is it related with the different outcomes of the different types of surgery? 3, what is the molecular mechanism for halo phenomenon?



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And what is the possible molecular mechanism for alpha-amylase regulating insulin release?