

PEER-REVIEW REPORT

Name of journal: *World Journal of Diabetes*

Manuscript NO: 84807

Title: New environmental factors related to diabetes risk in humans: Systematic review and meta-analysis of emerging bisphenols used in the synthesis of plastics

Provenance and peer review: Invited Manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 05046795

Position: Peer Reviewer

Academic degree: PhD

Professional title: Research Assistant Professor

Reviewer's Country/Territory: China

Author's Country/Territory: Spain

Manuscript submission date: 2023-03-28

Reviewer chosen by: Geng-Long Liu

Reviewer accepted review: 2023-04-18 02:26

Reviewer performed review: 2023-04-19 02:53

Review time: 1 Day

Scientific quality	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Very good <input checked="" type="checkbox"/> Grade C: Good <input type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
Novelty of this manuscript	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Good <input checked="" 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 type="checkbox"/> Grade B: Good <input checked="" 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 type="checkbox"/> Grade B: Good <input checked="" type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No scientific significance
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 type="checkbox"/> Minor revision <input checked="" type="checkbox"/> Major revision <input type="checkbox"/> Rejection
Re-review	<input type="checkbox"/> Yes <input checked="" 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

I have only 1 minor concern: Does the authors performed meta-analysis about “(Bisphenol) AND (Diabetes OR Hyperglycemia)” with any positive or negative control?

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Peer-review model: Single blind

Reviewer's code: 03814201

Position: Editorial Board

Academic degree: PhD

Professional title: Associate Professor, Senior Researcher

Reviewer's Country/Territory: China

Author's Country/Territory: Spain

Manuscript submission date: 2023-03-28

Reviewer chosen by: Geng-Long Liu

Reviewer accepted review: 2023-04-18 14:43

Reviewer performed review: 2023-04-26 15:13

Review time: 8 Days

Scientific quality	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Very good <input checked="" type="checkbox"/> Grade C: Good <input type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
Novelty of this manuscript	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Good <input checked="" type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No novelty
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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 this manuscript, the authors aimed to investigate the association between environmental pollutants such as Bisphenol A (BPA) and Diabetes Mellitus (DM). The study conducted a systematic review and a meta-analysis of the academic literature to evaluate the state of the art. The systematic analysis of the literature revealed 13 recent academic articles (2017-2023) related to the study paradigm. The qualitative analysis showed interesting data linking diabetes to the three most widely used substitute bisphenols in the industry: BPS, BPF, and BPAF. Finally, the meta-analysis determined a positive relationship with BPS, BPF, and BPAF, which has only been statistically significant with BPS. The study highlights the critical public health issue of DM and the potential adverse health impact of environmental pollutants such as BPS, BPF, and BPAF. The results of the study could be used to alert regulatory authorities and policy-makers to take necessary measures to regulate the use of BPA substitutes and reduce the environmental exposure to these chemicals. As the authors mentioned the present study underscores the need for further research to strengthen the evidence base on the associations between DM and environmental pollutants. The study provides valuable

insights into the potential health risks of BPA substitutes, which could help guide future research and public health interventions. However, one of my most concerns is how can the new environmental factors obtained by data analysis be verified by experiments.

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Peer-review model: Single blind

Reviewer's code: 05477765

Position: Peer Reviewer

Academic degree: PhD

Professional title: Assistant Professor, Senior Researcher

Reviewer's Country/Territory: Russia

Author's Country/Territory: Spain

Manuscript submission date: 2023-03-28

Reviewer chosen by: Geng-Long Liu

Reviewer accepted review: 2023-04-18 03:30

Reviewer performed review: 2023-04-30 20:20

Review time: 12 Days and 16 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 type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Good <input type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No novelty
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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 manuscript of “New environmental factors related to diabetes risk in humans: systematic review and meta-analysis of emerging bisphenols used in the synthesis of plastics” by R. Moreno-Gómez-Toledano and co-authors aims to analyze the potential new dangers that society faces with the replacement of bisphenol A (BPA) by new bisphenols. For this purpose, the meta-analysis of the relationship between new bisphenols and diabetes in humans was carried out for each bisphenol, using the RevMan software. In addition, funnel plots were developed to study publication bias. The primary outcome measures were serum/plasma or urinary bisphenols (except BPA) in diabetic context. The analysis was limited to humans and English language, but no restriction was applied in the academic search engines. The results showed that new bisphenols could represent a health risk equivalent to Bisphenol A. The manuscript is quite interesting and well written; all the conclusions are supported by the data obtained. The topic of the manuscript is highly relevant and timely in view of recent the statistics on the incidence of diabetes mellitus (DM) in the world. The manuscript contributes to the development and systematization of knowledge about a relationship between DM



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