

PEER-REVIEW REPORT

Name of journal: *World Journal of Psychiatry*

Manuscript NO: 85756

Title: Pilot study of genome-wide DNA methylation and gene expression for treatment response to escitalopram in panic disorder

Provenance and peer review: Unsolicited Manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 02325110

Position: Editorial Board

Academic degree: MD

Professional title: Chief Doctor, Senior Research Fellow

Reviewer's Country/Territory: Germany

Author's Country/Territory: China

Manuscript submission date: 2023-05-17

Reviewer chosen by: AI Technique

Reviewer accepted review: 2023-05-26 17:04

Reviewer performed review: 2023-06-05 09:35

Review time: 9 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 Grade E: Do not publish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
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 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
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 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

Zou et al. submitted a very interesting pilot study. This study aimed to compare genome-wide methylation and gene expression patterns between responsive and non-responsive patients with PD after 4 weeks of escitalopram treatment. Thirty patients with PD were enrolled in this study (responders = 13; non-responders = 17). A total of 701 differentially methylated positions (DMPs) were found between responders and non-responders ($|\Delta\beta| \geq 0.06$, $q < 0.05$), and the hyper- and hypomethylated CpG sites were 511 (72.9%) and 190 (27.1%), respectively. The work of Zou et al. shows that DMPs might be associated with the treatment response to escitalopram in PD. This pilot study is suitable for a publication in a reputable journal because the authors' hypotheses are clinically relevant and have never been tested before. The conduct of the study as well as the text and the layout of the manuscript are not objectionable. It is a very carefully planned and described work. However, there are limitations with regard to the comparatively small sample size and the study design (pre-to-post-treatment design and long-term follow-up are missing). However, the authors discuss these limitations openly and critically in the Discussion and Conclusion paragraphs. I recommend publishing

this study without significant changes if such a specific genetic topic is eligible for the WJP.

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Reviewer's code: 05270700

Position: Editorial Board

Academic degree: DSc, MD, PhD

Professional title: Professor

Reviewer's Country/Territory: Bulgaria

Author's Country/Territory: China

Manuscript submission date: 2023-05-17

Reviewer chosen by: Geng-Long Liu

Reviewer accepted review: 2023-06-23 12:58

Reviewer performed review: 2023-06-24 18:29

Review time: 1 Day and 5 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

This paper presents results from preliminary study of differentially methylated DNA positions to predict treatment response in patients with panic disorder. Drug choice and therapeutic monitoring are a major challenge for psychiatry in the era of psychopharmacology, a challenge much more tangible then it is for other clinical medical disciplines. Abstract provides meaningful summary of the findings. Methods appear to be appropriate given the aim of the study. Conclusions are based on data, limitations are duly acknowledged. Perhaps the authors may consider in the discussion broader intepretation of their results in the context of evidence based psychiatry:
<https://doi.org/10.1007/s13148-010-0014-2>