

## PEER-REVIEW REPORT

**Name of journal:** *World Journal of Psychiatry*

**Manuscript NO:** 71969

**Title:** Altered thalamic subregion functional networks in patients with treatment-resistant schizophrenia

**Provenance and peer review:** Unsolicited Manuscript; Externally peer reviewed

**Peer-review model:** Single blind

**Reviewer's code:** 06121314

**Position:** Peer Reviewer

**Academic degree:** MS

**Professional title:** Instructor, Teacher, Technician

**Reviewer's Country/Territory:** China

**Author's Country/Territory:** South Korea

**Manuscript submission date:** 2021-09-28

**Reviewer chosen by:** AI Technique

**Reviewer accepted review:** 2021-10-04 02:42

**Reviewer performed review:** 2021-10-16 03:43

**Review time:** 12 Days and 1 Hour

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 Grade E: Do not publish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 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

<b>Peer-reviewer statements</b>	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

I really appreciate the opportunity to review the manuscript 71969 entitled: "Altered thalamic subregion functional networks in patients with treatment-resistant schizophrenia". This manuscript aims to investigate the functional connectivity analysis of thalamic subregions with cortical networks and voxels in patients with treatment resistant schizophrenia , and important novel findings regarding the pathophysiology of treatment resistant schizophrenia were obtained. The paper is very interesting and well written, methodologically unexceptionable, and the new implementations provide a valid contribution to the work. But the scanning parameters need further confirmation, for example, Three-dimensional T1-weighted images were acquired using a magnetization-prepared rapid gradient echo sequence (repetition time [TR]: 1,900 ms; echo time [TE]: 2.5 ms; flip angle: 9°; field of view [FOV]: 250 mm; image matrix: 256 × 246 mm; voxel size: 1.0 × 1.0 × 1.0 mm<sup>3</sup>; 176 slices). If FOV = 250 mm, image matrix: 256 × 246 mm, the voxel size can't be accurate to 1.0 × 1.0 × 1.0 mm<sup>3</sup>.

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**Title:** Altered thalamic subregion functional networks in patients with treatment-resistant schizophrenia

**Provenance and peer review:** Unsolicited Manuscript; Externally peer reviewed

**Peer-review model:** Single blind

**Reviewer's code:** 05148062

**Position:** Peer Reviewer

**Academic degree:** PhD

**Professional title:** Associate Professor

**Reviewer's Country/Territory:** China

**Author's Country/Territory:** South Korea

**Manuscript submission date:** 2021-09-28

**Reviewer chosen by:** AI Technique

**Reviewer accepted review:** 2021-10-18 14:21

**Reviewer performed review:** 2021-10-22 03:42

**Review time:** 3 Days and 13 Hours

<b>Scientific quality</b>	<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
<b>Language quality</b>	<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
<b>Conclusion</b>	<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
<b>Re-review</b>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

**Peer-reviewer  
statements**

Peer-Review: [ ☒ ] Anonymous [ ☐ ] Onymous  
Conflicts-of-Interest: [ ☐ ] Yes [ ☒ ] No

## **SPECIFIC COMMENTS TO AUTHORS**

In this study, the authors examined the FC of thalamic subregions with cortical networks and voxels, and the associations of this FC with clinical symptoms in patients with treatment-resistant schizophrenia (TRS). They found altered FC within thalamic subregions and cortical functional networks, and within the thalamocortical pathway. This study improves our understanding of the relationships between the thalamocortical pathway and symptoms of TRS. The paper may benefit from some minor revisions. (1) References can be used more in recent three years. (2) The FC between subregion 2 and LON network is abnormal in Figure 1. However, the paper describes that the FC between subregion 2 and Mo network has increased significantly. This is inconsistent. (3) Figures 2, 3, and 4 are not clear enough to read. (4) It would be better to separate the conclusion part. (5) In supplementary files, I couldn't see Fig S1. (6) How to segment the subregions of the thalamus? Could you describe the steps in detail? This is the basis of the article. (7) Reference of CONN toolbox should be given.

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**Provenance and peer review:** Unsolicited Manuscript; Externally peer reviewed

**Peer-review model:** Single blind

**Reviewer's code:** 03709824

**Position:** Editorial Board

**Academic degree:** BSc, MSc, PhD

**Professional title:** Full Professor, Professor

**Reviewer's Country/Territory:** India

**Author's Country/Territory:** South Korea

**Manuscript submission date:** 2021-09-28

**Reviewer chosen by:** AI Technique

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**Review time:** 12 Days and 4 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 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



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<b>Peer-reviewer statements</b>	Peer-Review: [ <input checked="" type="checkbox"/> ] Anonymous [ <input type="checkbox"/> ] Onymous Conflicts-of-Interest: [ <input type="checkbox"/> ] Yes [ <input checked="" type="checkbox"/> ] No
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#### **SPECIFIC COMMENTS TO AUTHORS**

The design of this manuscript is very well thought of, and will sure increase further our understanding on the role of disrupted thalamic FC in the pathophysiology of treatment resistant schizophrenia. I have only only few concerns, which I have highlighted in the manuscript attached below.