Dear BPG Editorial Office,

We are submitting the revised manuscript with NO: 93762, entitled "Cognitive dysfunction in schizophrenia patients caused by down-regulation of GABA receptor subunits" for publication in Medicine. According to the comments, we have already revised the manuscript. All revisions have been marked in red in the revised manuscript. The following are our reply to the comments, item by item.

Once again, thank you for your kind reconsideration.

Yours sincerely,
Weiwei Zhu
E-Mail: q1640809558@163.com

Comments from the Editors and Reviewers:

Reviewer #1:

1. There are no inclusion criteria and exclusion criteria for healthy controls, how are healthy controls selected?
   
   Answer: We thank the Reviewer for his/her kind evaluation of our work. In order to enhance clarity, inclusion and exclusion criteria have been established for healthy controls, while serial numbers have been assigned to inclusion and exclusion criteria for patients diagnosed with schizophrenia. and the necessary revised/added contents have been highlighted with yellow color in the revised manuscript. Thanks again!

2. The choice of sample size needs to be increased in the method section to provide a more detailed justification.
   
   Answer: We thank the Reviewer for his/her kind evaluation of our work. We have added the sample size selection process to the general information in the method section. Thanks again!
3. Any steps taken to minimize measurement error or bias need to be explained, e.g., a detailed description of the calibration process for the 1H-MRS equipment or the training and blinding of the assessors for the MCCB could increase the credibility of the findings.

Answer: We thank the Reviewer for his/her kind evaluation of our work. In order to minimize the measurement error or deviation and increase the credibility of the findings, we added "each visit of the study involved the same 1H-MRS pulse sequences and equipment.", added "MCCB Data Quality Assurance Each tester who interacted with patients was trained on the administration and scoring of the MCCB through video and group sessions.", and changed "proton magnetic resonance spectroscopy (1H-MRS)" to "1H-Magnetic Resonance Spectroscopy (1H-MRS)" to make it more accurate. Thanks again!

4. The discussion adeptly integrates the study's findings with the broader literature, offering meaningful implications for schizophrenia treatment. However, the section could be strengthened by a more thorough exploration of potential mechanisms underlying the GABA-cognitive impairment relationship.

Answer: We thank the Reviewer for his/her kind evaluation of our work. We have added descriptions to explore the potential mechanisms underlying the GABA-cognitive impairment relationship. In addition, we have added the corresponding references, adjusted the format of the references uniformly, and also added the abbreviation list and screening flow chart. Thanks again!