Reviewer's report

Title: Sleep quality, BDNF genotype and gene expression in individuals with chronic abdominal pain

Version: 1 Date: 2 June 2014

Reviewer: zheyu chen

Reviewer's report:

The interaction between sleep disorder and chronic abdominal pain (CAP) remains unclear. Here Reddy et al. try to investigate the association among sleep quality, CAP and gene expression. The authors found some differentially expressed genes which may be related to poor sleep quality and CAP. Though the manuscript provided us some information about gene expression and sleep quality and CAP, there are several major concerns about the manuscript.

Specific points#

1. I do not think genotyping of 59 participants is enough to compare the difference no matter in the two groups of sleep quality or in the two groups of CAP. What's more, the participants are different races; confounders may be hard to control.

2. The author showed that CAP is associated with poor sleep quality. The author also showed that the IGF1 expression was significantly reduced in poor sleep and was increased in CAP. I don't understand the causal relationship among IGF1 expression, poor sleep and CAP.

3. How to get the “subset of 26 participants” (page 13, line 7) should be discussed.

4. I think the BDNF SNP is not a major point related to the manuscript.

Minor points#

1. Page 4, line 12: “on the gene rs6265” is not appropriate. rs6265 is just a SNP but not a gene.

2. Page 4, line 14: Since the 16th reference has proved the phenomenon that BDNF Val66Met modulates sleep intensity, then details should be introduced.

3. Page 5, line 18: Data of genotyping studies should be given.

4. Page 10, line 5: “DNA extraction” should be changed into “DNA extraction and Genotyping”. The primers and probes of genotyping and the experimental conditions should be provided.

Level of interest: An article of insufficient interest to warrant publication in a scientific/medical journal
**Quality of written English:** Not suitable for publication unless extensively edited

**Statistical review:** Yes, but I do not feel adequately qualified to assess the statistics.

**Declaration of competing interests:**

I declare that I have no competing interests