Reviewer’s report

Title: Association of 5HTR2A gene with suicidal behavior: Case-control study and updated meta-analysis.

Version: 3 Date: 15 November 2012

Reviewer: Clement Zai

Reviewer’s report:

The authors looked at one single-nucleotide polymorphism (rs6313) in the HTR2A gene for possible association with suicide attempt (with intent / ideation) in their sample of suicide attempters and health controls of Mexican descent and performed an updated meta-analysis. There are a number of issues that need to be addressed before this manuscript is acceptable for publication:

Major Compulsory Revisions

1. Methods page 4 case-control study: Mexican ethnicity itself is heterogeneous with African, Native American, and European admixture, even if the subjects were recruited from one state. The authors must address this point.

2. Methods page 4 Clinical evaluation: The findings of this study could have been confounded by the underlying psychiatric illness of the case population, especially when the authors are comparing them to healthy controls. The authors must acknowledge this point.

3. Methods page 5 Statistical analysis: What are the other parameters for power analysis (minor allele frequency, model, effect size observed here must be specified).

4. I am not sure if there is a problem with file conversion or typographical errors. There are numerous problems with Tables 1 and 2. Please double check.

Minor Essential Revisions:

1. Abstract: The authors should keep the marker ID and comparisons (ex., T versus C) consistent.

2. Introduction: The authors should include references on observed alterations in 5HIAA levels in suicidal subjects.

3. Methods page 5 Genotype assays: What does “FL” stand for?

4. The authors should describe briefly the criteria for meta-analysis. Moreover, the authors should attempt to run the meta-analysis on suicide attempt only, or suicide attempt in schizophrenia only to see if a more homogeneous phenotype would give better results. Also, the authors should not be removing studies from the meta-analysis based only on the effect on heterogeneity.

5. The authors should explore other variants in HTR2A.

Level of interest: An article of importance in its field
Quality of written English: Needs some language corrections before being published

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