Reviewer's report

Title: Correlations of Gene Expression with the Conners' inattention and hyperactivity/impulsivity rating scales in Tourette syndrome: A Pilot Study

Version: 1 Date: 4 July 2012

Reviewer: Diego Forero

Reviewer's report:

This is an interesting manuscript on the field of molecular genomics of neuropsychiatric disorders. It is a well written manuscript, reporting novel findings. The impact of the manuscript will benefit from some improvements:

Major Compulsory Revisions
1. Authors should submit raw microarray data to a public online repository (NCBI GEO or EBI ArrayExpress, for example), following international recommendations in the field.

Minor Essential Revisions
2. Authors should discuss about the possible confounding effects of inclusion of two patients taking medicaments.
3. Authors should expand on the description of the genetic basis of TS (mutations in SLITRK1 in a subset of patients, among others).
4. Authors should provide a more detailed explanation of the contents and advantages of the Conners’ scales.
5. Authors should discuss other papers that explore the correlations of gene expression between brain tissues and blood (PMID: 16526044, for example).
6. Exploration of genomic data would benefit from other kinds of data mining approaches: Focus on genes known to be brain-expressed, integration with large datasets from GWAS for ADHD, exploration of KEGG derived pathways, among others. They could use freely available bioinformatic tools, such as DAVID or Babelomics.
7. Supplementary files could be grouped in two files, to facilitate readers their downloading and visualization.
8. Table 1 could be modified, focusing on significant pathways, leaving the extended lists of associated genes for the supplementary files.
9. Authors should revise the following statement “Due to the large numbers of probes on the microarrays no gene passed multiple comparison correction testing using the Benjamini-Hochberg False Discovery rate (FDR<5%) approach” on the Limitations section.
Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:
I declare that I have no competing interests