Reviewer's report

Title: Glucocorticoid receptor mRNA and protein isoform alterations in the orbitofrontal cortex in schizophrenia and bipolar disorder

Version: 2 Date: 9 April 2012

Reviewer: Patrick McGowan

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This paper reports differences in GR splice variant and protein isoform expression in the orbitofrontal cortex among Bipolar and Schizophrenic subjects. The background is nicely elucidated, and the methods well described. The results provide valuable information regarding the influence of psychosis on glucocorticoid signaling in OFC. Provided the concerns below can be addressed, as I believe they easily can, I feel that this paper will make a worthy contribution to the literature.

• Minor Essential Revisions

1. The authors should show the data for the endpoint PCR that they describe indicates the subset of GR splice variants most robustly expressed in the OFC, because these data provide a rationale for proceeding with the analysis of only these splice variants.

2. Please fix reference #41.

• Discretionary Revisions

3. We seem to be missing a piece of the puzzle – that of the relationship between the untranslated splice variants shown to altered and the expression of the GR1a-D1 isoform. Is there a known relationship between these?

4. One possible implication of the differences seen among the groups in the absence of genotype differences is the presence of epigenetic alterations, which may deserve mention here, as they have been shown in human and animal studies to be involved in the regulation of GR as a function of early life factors.

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

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