Reviewer's report

**Title:** Association of Decreased Early Pregnancy Serum Brain-Derived Neurotrophic Factor (BDNF) Concentrations with Antepartum Depression

**Version:** 3  **Date:** 14 January 2015

**Reviewer:** Beth Levant

Reviewer's report:

This is an interesting and timely report demonstrating the correlation between serum BDNF concentrations during early pregnancy and antepartum depression. Depression during pregnancy is becoming increasingly recognized as a significant health concern in pregnant women, as well as predictor of postpartum depression. The study is well designed and controlled, and has ample statistical power. The analysis and interpretation are appropriate and consider the limitations of the study. The title and abstract are accurate, and the manuscript is clearly written. Methods are well described. The findings are significant and should aid in identifying women at risk of antepartum depression.

Major compulsory revisions:

1. **Introduction:** Some additional background about BDNF and its significance in depression should be included.

2. **Discussion:** The discussion of the literature on BDNF in depression is rather brief and cursory. Importantly, the postmortem findings on hippocampal BDNF expression in depression and after antidepressant treatment are omitted. This paragraph should be expanded to more accurately reflect the state of the field.

3. The Discussion should consider the biological significance of serum BDNF concentrations and its role in the pathophysiology of depression, if any.

Minor compulsory revisions:

1. Page 9, last sentence: Needs to be rewritten.

**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

**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.