Reviewer's report

Title: Electroacupuncture upregulates ERK signaling pathways and promotes adult hippocampal neural progenitors proliferation in a rat model of depression

Version: 3 Date: 23 July 2013

Reviewer: Hee Young Kim

Reviewer's report:

Major Compulsory Revisions

1. In Methods, “These two acupoints have been applied and showed some antidepressant effects in our preliminary and other studies [4, 12, 13].”
   But, references #4, #12, #13 did not use a pair of Du-20 and GB-34. And, authors did not explain acupuncture procedures yet in detail, i.g., anesthesia, restraint methods, etc.

2. Revised manuscript is still missing several critical points;
   (1) Although ERK signals should be affected under stress conditions, ERK in their data are intact and enhanced by acupuncture-like treatment. How do you lead to conclude that acupuncture-like treatment reduces depression by affecting ERK?
   (2) As Sham group had AD-like effects, anti-depressant effects by electrical stimulation at Du-20 and GB-34 might be due to general electrical effects or other procedures. Authors should clarify why Sham EA had similar effects as EA treatment. Sham group should be included in manuscript.

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.