Reviewer's report

Title: Rac3 induces a molecular pathway triggering breast cancer cell aggressiveness: Differences in MDA-MB-231 and MCF-7 breast cancer cell lines.

Version: 2 Date: 1 September 2012

Reviewer: Vimla Band

Reviewer's report:

In this revised manuscript the authors investigated the role of RAC3 in breast cancer aggressiveness and TNF-induced apoptosis upon knockdown of RAC3 by siRNA. The authors observed that RAC3 is involved in the aggressiveness of cancer cells, through ERK/NF-κB pathway. The authors were asked to respond to several questions/concerns. In general, the revised manuscript has improved considerably from the previous version, however few concerns still remains. The following points were not satisfactorily answered.

The authors must include a normal cell line (such as MCF10A) to assess if RAC3 knockdown effect is tumor cell specific under in vitro conditions.

Although the authors added H3 for nuclear control, they only used H3 in nuclear fraction, and did not check its’ expression in cytoplasmic fraction; for GAPDH, the authors only showed in cytoplasmic fraction, did not show its’ expression in nuclear fraction. Authors, please use H3 and GAPDH in both fractions.

Level of interest: An article of importance in its field

Quality of written English: Needs some language corrections before being published

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

Declaration of competing interests:

I have no competing interests in reviewing this manuscript